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ABSTRACT

Seventy-nine documents comprise this ERIC-CUE comprehensive annotated bibliography. Documents were assembled through a computer search using the Datrix System of University Microfilms and through a manual search of the Dissertation Abstracts International dating from 1965 through 1973. The topics covered include Social Studies; Black Studies; Mathematics; Science; Vocational Education; Music; Art, Drama; Health, Physical Education, and Recreation; Foreign Languages; Tutoring and Individualized Instruction; and Other Curriculums. Documents within each topic are presented in order of year of completion and are cross-referenced in a subject index. Author and institutional indexes are also provided. (AM)

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Curriculum and Instruction for Minority Groups:
An Annotated Bibliography of Doctoral Dissertations

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314

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TABLE OF CONTENTS

Preface iv

The Bibliography

Social Studies 1
Black Studies 19
Mathematics 31
Science 51
Vocational Educational 54
Music, Art, Drama 76
Health, Physical Education and Recreation 80
Foreign Language 88
Tutoring and Individualized Instruction 90
Other Curriculums 103

Indexes

Author 110
Institution 112
Subject 113

6

PREFACE

The ten years since the enactment of ESEA Title I in 1965 have provided a unique opportunity for anthropologists, sociologists, political scientists, educators, and others to attempt to find answers to unanswered questions about the teaching-learning process, especially in relation to minority group children and youth and students from low socioeconomic backgrounds. Not only did the law provide extensive funds for compensatory education and innovative programs, but it also mandated evaluation of these programs. This flood of new programs provided fertile grounds for doctoral dissertation research on the education of minority populations.

The ERIC/CUE* staff, believing that much could be learned about doctoral research itself, children, and educational programs, decided to attempt to provide comprehensive collections of doctoral dissertation abstracts in those areas of special interest to the Clearinghouse. This document is one in this series of publications entitled the ERIC/CUE Doctoral Research Series.

Both a computer search, using the Datrix system of University Microfilms, and a supplementary manual search were done on Dissertation Abstracts International from 1965 through 1973. The subject terms which were used are: black, Puerto Rican, Mexican American, inner city, ghetto, urban, slum, rural, Negro American Indian, disadvantaged, desegregation, Spanish surname.

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The Clearinghouse would like to be informed of any appropriate dissertations, old or new, which do not appear in these bibliographies.

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The abstracts in this bibliography have been organized under various topics. Within each topic, the abstracts are presented in order of year of completion. The abstracts have been cross-referenced in a subject index. Author and institution indexes have also been included.

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School Desegregation and Organization: An Annotated Bibliography of Doctoral Dissertations. 190p. (ED number to be announced).

School and Psychological Studies of Minority Children and Youth: An Annotated Bibliography of Doctoral Dissertations. (ED number to be announced).

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Social Studies

1. Ratcliffe, Robert Henry. A Critical Analysis Of the Treatments Given Representative Social Science Ideas In Leading Eleventh Grade American History Textbooks. Northwestern University, 1966. 128p. Director: John R. Lee. 66-14,050.

The main purpose of this study was to determine the extent and kind of knowledge about selected representative ideas from the social sciences that the high school American history student could be expected to learn from studying the treatments afforded those ideas in a sample of widely used textbooks.

Two analytical tasks were required. The first identified the representative ideas social scientists felt essential to an understanding of their respective disciplines. The second inventoried the nature of the uses of these terms, or representative ideas, in leading eleventh grade American history textbooks.

The published writings of acknowledged scholars in the fields of political science, economics, geography, sociology, social psychology, and cultural anthropology, who have been addressing themselves to the question of what subject matter from their discipline should be included in the education of American youth, were analyzed. This analysis of 79 sources revealed 345 terms identified in at least one article. The criterion of identification in four or more articles was adopted. Application of this criterion reduced the list to 89 representative ideas. These 89 then became the standard against which the leading eleventh grade American history textbooks were examined. Eight secondary school textbook publishers independently identified the same six textbooks as leaders and estimated that those books represented between 75 and 94 per cent of the current market.

The quantative method inventoried the number of times each representative idea appeared in print in the content of each of the six books. The 89 terms were used a total of 30,603 times. Each of the 30,603 usuages was then placed into one of the following six qualitative categories: (1) mention, (2) appositives, (3) dictionary definitions, (4) examples or components, (5) characteristics or operations, and (6) charts and graphs. Of the 30,603 total usages, only 156 encompassed more than mere mention of the term.

Several scholars attested to the validity of the analytic categories used in this study. Four jurors tested the reliability of the categorization process. The observed agreement between each of the jurors and the classifications used in this study was between 90 and 95 per cent. Application of the Scott Index determined that the extent to which that agreement exceeded chance ranged from 0.85343 to 0.92672. The categories were thus judged to be valid and the categorization procedure reliable.

Analysis of the list of representative ideas indicated clearly that interrelationships exist among the social sciences. Of the 89 only fourteen failed to be identified as basic to the understanding of more than one discipline. Seventy-five were specified as important in two or more of the disciplines. Eleven terms were identified as representative ideas in five of the disciplines, and five others were identified by the scholars as being basic to an understanding of all six social sciences.

The quantitative analysis of the textbooks revealed that 31 of the 89 representative ideas were either actually or virtually ignored, while 28 of the terms did receive adequate quantitative coverage. This study indicated, however, that political and economic terms still receive significantly greater quantitative treatment than do the ideas of the other social sciences.

The qualitative analysis showed that there was no explicit attempt by the author to explain, define, or otherwise clarify the meaning of 45 of the 89 terms. Of the 44 receiving any qualitative treatment only 20 received such treatment in more than one of the six books. Only one term, inflation, received qualitative treatment in all six textbooks.

On the basis of the qualitative and quantitative findings of this study, the treatments afforded the representative ideas of the social sciences by the textbooks analyzed were judged to be inadequate.

2. Haines, Gerald Lee. Criteria For the Development Of Drug Education Curricula In Elementary and Secondary Schools. University of Southern California, 1971. 185p. Chairman: Professor Olson. 72-23,128.

Problem. In recent years, drug abuse among young people has grown at an enormous rate. It has been expected by the community and recognized by many educators that the schools have a major responsibility in the solution to this problem. However, there is ample evidence that the schools have not been an effective deterrent to drug abuse.

Purpose. The purpose of the study was (1) to develop criteria that may be used as guidelines in the development of effective drug abuse curricula in the schools and (2) to develop criteria that may be used as guidelines for the education of school personnel to implement effective drug abuse curricula.

Procedures. The study was developed in three phrases: (1) the clarification of the problem and the purpose of the study through a review of literature, a statewide survey, and interviews with authorities in the field of drug abuse; (2) the gathering of criteria and their development into an opinionnaire; and (3) the validation of the criteria by a jury of authorities in the field of drug abuse.

Findings. The findings in this study report the relative strength of each of the 194 individual items that make up the criteria for a drug education program. The findings are so numerous that the reader is referred to the dissertation for study of the individual items. The criteria are listed under the following headings: (1) Attitudes that when assimilated by a student would be effective in deterring him from any form of drug abuse. (2) Information that should be taught in the schools to develop attitudes that deter drug abuse. (3) Information to be learned by school personnel to develop most effectively drug deterring attitudes in students. (4) Attitudes and behaviors to be developed and exhibited by school personnel to develop most effectively drug deterring attitudes in students. (5) Guidelines to be used in developing a drug education curriculum in the schools. (6) Guidelines to be used in developing a faculty training program in drug education.

Conclusions. (1) The development of attitudes that deter drug abuse is a proper objective for a drug education program. (2) The development of drug deterring attitudes is the responsibility of the total school curriculum. (3) The teacher attitudes and behaviors that were highly recommended in the study are very important factors leading to the success of a drug education program. (4) Drug education is most effective when it is a planned sequence, for kindergarten through grade twelve, balanced between cognitive and affective learning activities. (5) Knowledge and skills dealing with the ability of the student to cope with the social environment in which he lives are important aspects of an effective drug education curricula. (6) The method by which information regarding drugs is communicated has a strong effect upon the attitudes developed by a student.

Recommendations. (1) Drug education curricula should have as their objectives the development of specified attitudes that deter drug abuse. (2) School boards and school administrators should recognize that the teacher-student relationship is a very important factor in the deterring of drug abuse and make a commitment to a continuous teacher in-service training program based upon the development of the teacher attitudes and behaviors recommended in this study. (3) Schools should develop a drug education curriculum that is a part of a total sequential health education program, for kindergarten through grade twelve. (4) Educational deterrents to drug abuse should begin at various stages in the primary, upper elementary, and intermediate schools as specified in this study. (5) At each grade level within the curriculum, the schools should provide for instruction in the understanding of the social environment in which the student lives. (6) Drug education should include information about the opportunities, stresses, and influences that are associated with the environment.

3. Pecoraro, Joseph. The Effect Of A Series Of Special Lessons On Indian History and Culture Upon the Attitudes Of Indian and and Non-Indian Students. Boston University School of Education, 1971. 172p. Major Professor: Martha A.T. John. 71-26,730.

Traditional social studies programs in elementary schools give little recognition to the contribution of the American Indian to our culture and heritage. This researcher found this to be particularly true in the both off-reservation and on-reservation schools of Maine. It was found that Indian and non-Indian children alike had little concept of the major role the Indian had played in our history and of his potential in today's society.

In an effort to change the attitudes toward the Indian of Indian and non-Indian children, a series of special lessons was prepared by this reseacher. These lessons consisted of 8 m.m. color. sound-film, slide-tape presentations, and some commercial material. These lessons emphasized the positive aspects of the Indian and, more importantly, brought out little known aspects of the contributions of Indians to our art, cultural heritage, and contemporary society. These lessons make great use of media and stress involvement on the part of the students. This discarding of inadequate textbook material and traditional classroom approaches certainly did a great deal to gain acceptance of the special lessons.

In order to measure the effectiveness of the special lessons, an experiment with a control group and an experimental group was conducted. The control groups received only the pre-and post-testing; they did not receive exposure to the special lessons. One Indian school and one non-Indian school composed the control group. There were ninety-one youngsters in the control group.

The experimental group consisted of seventy-two youngsters in an Indian school and a non-Indian school. These students received the pre-and post-testing and also received the exposure to the special lessons.

The pre-and post-testing consisted of a semantic differential, an attitude scale, and a series of open sentence stems. These instruments were either adapted or devised by this researcher.

The study revealed the following:

1. That the special lessons did have a positive effect on the attitudes of the Indian children.
2. That the special lessons did have a positive effect on the attitudes of the non-Indian children.
3. That the Indian improved in attitude more than the non-Indian children. This indicates an improved self-image.

There are significant implications here for curriculum designers in the social studies. This study shows that change is necessary in understanding the Indians and in helping the Indians to understand themselves.

4. Button, Christine Bennett. The Development Of Experimental Curriculum To Effect the Political Socialization Of Anglo, Black, and Mexican-American Adolescents. The University of Texas at Austin, 1972. 187p. Supervisor: O.L. Davis, Jr. 73-7523.

This study empirically tests the extent to which four experimental units in government influence the acquisition of political knowledge and the development of feelings of political efficacy and cynicism among Anglo, Black and Mexican-American twelfth-graders. The study population was comprised of 252 twelfth-graders from two high schools in Austin, Texas; the three ethnic groups were approximately equally represented in the experimental and contrast groups, although not in the individual classes. Four government classes and two teachers were selected at both target high schools by school district officials; two classes were designated as experimental and two as contrast. Students were assigned to classes according to the school district's regular computerized scheduling procedures; students were not ability grouped. The experimental units developed for use in this study emphasize the following: 1) each student's introspective analysis of his own political socialization; 2) an exploration of elitism, political linkages and institutional racism; 3) an examination of past and present case studies of political change; and 4) individual student fieldwork designed to involve students in the political structure of their city.

A political attitude and political knowledge questionnaire was administered immediately prior to and following the four month long experimental treatment. Throughout most of this period student-initiated classroom interaction was coded during two complete class periods every week in each of the study's eight classrooms using the SICI, an interaction analysis schedule designed for this study. Sixty in-depth taped interviews were conducted with a random stratified sample of students, approximately two months after the experimental treatment had ended.

The experimental units appeared to be salient means of increased feelings of political efficacy, political knowledge, and interest in politics among the study's Anglo, Black, and Mexican-American students. Some effects of the curriculum differed according to sex and ethnic group.

At one school increases in the amount of student-initiated classroom interaction during the experimental period was greater in the experimental group than in the contrast group; the range of different students initiating also increased to a greater degree in the experimental group. Further, ethnic differences were significant in the experimental group, with Blacks initiating more frequently than Anglos.

Increases in mean frequencies of student initiations did not differ significantly by treatment or ethnic group in the second school. However, increases in the range of different students initiating were greater in the experimental group.

At both schools, results from the student interviews amplified the statistical findings of the analyses of variance and covariance and supplied further evidence of the salience of the experimental curriculum on students' feelings of political efficacy, political interest and political behaviors. The interview technique, especially through the use of semi-projective items, appeared to have been a more valuable means of tapping true political attitudes than the penci -paper questionnaire.

5. Dorsey, Albert H.H. A Survey Study Of the Comparative Status Of Understanding and Reasoning In Conservation Concepts By Ninth Grade Students In the Pulbic Schools Of South Carolina. University of Virginia, 1972. 135p. 72-22,643.

The problem under consideration in this study was to determine the status of understanding and reasoning in conservation concepts and principles as demonstrated by ninth-grade students in the public schools of South Carolina.

All public schools in South Carolina were compared as to administration, organization, and level of accreditation as shown by annual high school reports submitted to the State Department of Education.

Forty-eight schools were chosen which would allow for comparisons of schools from three locations-urban (metropolitan centers of approximately 100,000 population), suburban (areas with a population of approximately 40,000 immediately adjacent to urban centers and extending out toward rural settings), and rural (population of 10,000 or less); two school sizes-over 650 enrollment and under 650 enrollemnt; and two conditions of race predominance in enrollment-predominantly black (over 50 per cent black) and predominantly white (over 50 per cent white). In addition a comparison was made between sexes by testing twenty male students and twenty female students in each school. Thus a 3-2-2-2 analysis design was indicated.

After schools were selected, the "Test of Reasoning in Conservation" was administered in both forms A and B to both male and female subjects in all 48 schools. Tests were hand scored and an analysis of variance calculated to determine significant differences within or among groups (urban, suburban, and rural) and conditions (A, males from predominantly black schools of over 650 enrollment; B, females from predominantly black schools of over 650 enrollment; C, males from predominantly white schools of over 650 enrollment; D, females from predominantly white schools of over 650 enrollment; E, males from predominantly black schools of under 650 enrollment; F, females from predominantly black schools of under 650 enrollment; G, males from predominantly white schools of under 650 enrollment; and H, females from predominantly white schools of under 650 enrollment).

The analysis indicated that significant differences did exist. Therefore a series of t-tests was developed to compare all possible comparisons of subjects. Comparisons showed no significant differences between urban and suburban schools, but both urban and suburban scored significantly higher than rural. With few exceptions, large schools scored slightly higher than small schools; subjects from predominantly black schools scored lower than subjects from predominantly white schools; and males scored generally higher than females.

Previous studies implied that in general public school students exhibited inadequate knowledge relative to conservation and that apparently more emphasis was placed upon renewable resources than other resource bases. Nothing in this study refuted these implications.

It was concluded from this study that students' understanding and reasoning in concepts and principles of conservation do differ when related to school location, school size, race predominance in school enrollment and sex of subjects. It is further concluded that adequate programs and instructional methods should be developed not only to account for these specific differences but to provide an opportunity for increased emphasis upon economic, sociological and human aspects of conservation.

It is recommended that further study be made to test specific variables related to the influence of socio-economic, socio-cultural and socio-psychological factors upon the ability of public school students to understand and reason relative to conservation concepts and principles.

It is further recommended that conservation education programs sufficient to specific needs be designed, developed and integrated into the curricular offerings of all public schools, and that, as pointed out by Sherman (1950), teachers be properly oriented through pre-service and in-service workshops which will develop both knowledge of and attitudes toward conservation education.

6. Fortney, Nancy Dreessen. Race As An Anthropological Concept In Social Studies Curriculum Materials. University of Houston, 1972. 157p. 73-9115.

This study was concerned with a comparison of scientific conceptions of race with the content found in social studies textbooks in adoption in the state of Texas during 1972-73. It was the problem of the study to: (1) describe and analyze the concept of race presented in selected social studies textbooks, (2) determine the scientific accuracy of that information, and (3) infer social and educational policy implications from the analysis of these data.

The following conclusions were drawn as a result of the findings of this study.

1. Relatively few social studies textbooks deal with theoretical aspects of the concept of race. The content of only

fourth of the twenty-nine items that were analyzed in this study defined and explained race scientifically. These were textbooks containing themes in the 3.30 categories. Compared to findings by Marcus in 1963 which found that only five out of forty-eight (10 percent) attempted to clarify what race is, the findings of the study indicate that some improvement has occurred in the last decade.

2. Themes related to the biological theory of race were not evenly distributed among the data items. Themes appeared in comparatively few items; where they occurred they were repeated. The majority of themes were contained in two secondary textbooks, and one elementary series.

3. The concept category Populations contained the most inconsistencies and inaccuracies and was the area in which there was the greatest need for clarification and correction in the material. Comparison of these findings to those by Sady in 1964 and McDiarmid and Pratt in 1971 indicates that some textbooks continue to mix linguistic, national, and cultural names with names of racial groups.

4. Physical anthropology as a field of study was omitted in those items which attempted to explain the role of the anthropologist in the study of man.

5. In development of the concept of human variation, the emphasis in all items was on cultural variability.

6. Physical trait differences among peoples is given comparatively little attention. Inasmuch as physical characteristics such as skin color have been made socially significant throughout man's history, and were criteria for caste and class systems still prevalent in the world today, this area deserves greater emphasis.

7. There was a general tendency among the items to label group or populations without stating the criteria for classifying those groups as such. Accurate and consistent labeling of categories is a critical aspect of concept formation. Should textbook authors or publishers be reluctant to state criteria for each label or grouping they identify, it should be considered that the more pluralistic our society becomes, the more important the labeling process becomes in rendering these myriad human groups into some intelligible order. Explicit criteria are essential to this process of conceptualization of the many groups of man.

8. The majority of textbooks that refer to racial groups limit categories of classification to the three major races, Mongoloid, Caucasoid, and Negroid.

9. Most of the information about race that was presented by Series A was concentrated in the teacher editions, particularly at the lower grade levels. This would indicate heavy reliance upon the teacher to transmit the information adequately, as well as accurately.

10. The general omission of content related to anthropological conceptions of race suggests: (a) some hesitancy on the part of authors and publishers to deal with the nature of race because of its controversial nature, (b) a desire to assume a neutral position by avoiding the subject altogether and (c) a

belief that physical differences are socially irrelevant, or at least not pertinent to history, political science, or geography content.

11. Although social studies textbook authors and publisher of Series B state in their preface an intent to follow guidelines of the new social studies in giving attention to the major concepts of the social sciences, race is not included in the content as a concept. Since anthropologists have identified race and culture as the two major concepts of the discipline, the absence of definitions and explanations of race detracts significantly from the effectiveness of the books as new social studies curricula.

Based on the findings revealed in this study the investigator recommends that:

1. A study be made of other types of social studies curriculum materials, by using the categories developed in this study, to determine the extent to which race is presented as an anthropological concept.

2. A study be made to determine the extent to which social studies materials reflect other major concepts from each of the social sciences.

3. Textbook authors, publishers, and curriculum developers give attention to the presentation of the concept of race in terms of its definition, explanation, and application of theory in racial classification of populations, in the preparation of materials for social studies classrooms.

4. Curriculum supervisors and developers should be made aware of the strengths and weaknesses of curriculum materials relative to areas of possible misconceptions of race. When these sources are identified, remediation should be made.

5. Authors, publishers, and curriculum developers need to clarify concepts of nationality, geographical origin, and cultural factors and differentiate them from the concept of race in social studies content. Man and society is the major focus os social studies content, and the nature of population groups is an important aspect of that content. In order to understand exactly what constitutes a racial population, it is essential to know what race is not.

6. Authors and publishers present and interpret the facts surrounding biological differences accurately so that observation of racial differences may be placed in proper social perspective. Physical or racial differences are a fact of human existence and cannot be bypassed. Misconceptions and misunderstandings of the significance of these differences are potentially harmful to mankind.

7. Authors and publishers recognize the relationship between the resolution of current racial issues and understanding of the nature of racial differences. Racial discrimination based on skin color differences and the perpetuation of negative attitudes toward darker skin shades stem from incorrect assumptions of a constitutional inferiority among darker skinned persons.

8. Administrators may need to provide teachers with special preparation in this concept area as a result of the lack of accurate information about the concept of race in social studies textbooks.

7. Judd, Barbara W. Income Distribution, Work In the City, and City People In Conflict: Three Curriculum Units For Slow Learners. Carnegie-Mellon University, 1972. 335p. 72-29,858.

The curriculum materials developed by this dissertation comprise three chapters of a course on the American city written by staff members and graduate students in History at Carnegie-Mellon University. The course, intended for ninth grade students with learning disabilities and low achievement levels, focuses upon the people and problems of contemporary urban America. The chapters contain a variety of text materials-readings, skits, picture lessons, charts, graphs, and tables. A student workbook, lesson plans, tests, and audio-visual materials including recordings, picture cards, film strips, and evidence cards also accompany the chapters. In addition to these curriculum materials, this dissertation includes a rationale for and an evaluation of those materials and a critical analysis of related historical scholarship.

The objectives outlines in The New Social Studies for the Slow Learner: A Rational for a Junior High School American History Course (New York, 1969) prepared by the staff of the Curriculum Development Center, Carnegie-Mellon University provide the broad goals of the course. In the affective domain, these include student attitudes toward learning and toward him or herself and clarification of values. In the cognitive domain, they include learning and inquiry skills and knowledge goals. The length of lessons, vocabulary level, and variety in the medium of instruction are controlled carefully.

Chapter II, "Income Distribution," examines income distribution through case studies which focus on ways Americans earn and spend money and through statistics which show how national income is distributed. The chapter focuses upon the life styles of individuals or families whose incomes fall within five different groups. Students investigate the values of these persons. They are also encouraged to clarify the things which they consider most essential for a good life.

Chapter III, "Work in the City," approaches the economic life of a city through work. The chapter helps students learn how to apply for a job and to clarify some criteria they may use in choosing a career. It also presents a wide range of occupations, emphasizing work patterns in different jobs and the attitudes of individual workers toward their jobs.

Chapter IV, "City People in Conflict," focuses upon prejudice and discrimination as important sources of conflicts in urban areas. The first eight lessons of this chapter show that members of various ethnic and racial groups have faced, at different times in the past, discrimination in jobs, housing, and the use of public services in American cities. The remainder of the chapter investigates contemporary attitudes of white and black Americans toward each other. Several lessons help students to empathize with victims of prejudice and discrimination and to begin to clarify their own views of people whose religion, nationality, or race differs from their own.

Three considerations guided the selection and development of these topics-the importance of the issue, the interests of the students, and the opinions of scholars. Experience teaching the materials showed that the interests of the students proved to be the most effective basis on which to develop curriculum for low achievement students.

8. Marek, Rosanne J. The Effects Of Two Strategies Of Teaching Social Studies On Fourth-Grade Pupils' Scholastic Achievement, Racial Attitudes, and Self-Concepts. (Previously copyrighted material on several pages not microfilmed at request of author. Available for consultation at Kent State University Library). Kent State University, 1972. 133p. Director: Melvin Arnoff. 73-6626.

The major objective of this study was to examine the relative effectiveness of the depth-study approach and the expository method of teaching social studies in three areas of pupil development: scholastic achievement, racial attitudes, and self-concept.

Three evaluative instruments were selected to assess the scholastic achievement of the groups. The Sequential Tests of Educational Progress (STEP) was employed to determine the pupils' proficiency in the use of social studies skills. The Unit Achievement Test (ACH) was employed to assess the pupils' understanding of the subject-matter studied in the social studies unit. The Social Studies Inference Test (SSIT) was employed to assess the pupils' ability to form valid social studies generalizations.

One evaluative instrument was selected to measure the pupils' racial attitudes. The Picture Attitude Scale (PAS) was employed to measure the pupils' attitudes toward lower- and middle-class Negroes and Caucasians.

One evaluative instrument, the Self-Concept Scale (SCS), was selected to assess the pupils' self-concepts.

The research sample was comprised of 211 Caucasian children enrolled in eight fourth-grade classes in urban schools. Four classes in which 104 pupils were enrolled were assigned to the control group and were taught a social studies unit by the expository method. Four classes in which 107 pupils were enrolled were assigned to the experimental group and were taught the same social studies unit by the depth-study approach.

The content of the three-week unit dealt with an investigation of the cultural backgrounds of African-Americans. North

European-Americans, and American Indians. This unit was an adaptation of an adaptation of an eight-week unit which was an integral part of the fourth-grade sequence of Focus on Inner-City Social Studies (Project FICSS) which prepared a comprehensive social studies curriculum for urban schools.

An analysis of covariance was utilized to determine if the difference between the groups' performances on each of the five measures were significant at .05 level. It was found that there were not significant differences between the two groups' performances on the STEP, SSIT, and PAS. However, the control group performed more successfully on the ACH, while the experimental group performed more successfully on the SCS. Though not hypothesized, it was observed that there were substantial increases in both groups' scores on the PAS pre- and post-tests. This observation suggested that subject matter content can affect the formation and modification of racial attitudes.

Five independent variables: (1) method of instruction, (2) number of pupils in the class, (3) sex of the pupil, (4) teacher-estimates of individual academic achievement, and (5) verbal intelligence test scores were correlated with the five criterion measures.

Of the five independent variables, three were found to be significant predictors of pupil performance. Method of instruction and verbal intelligence test scores were significant predictors of pupil performance on the SCS. Verbal intelligence test scores and teacher-estimates of academic achievement were significant predictors of pupil performance on the STEP and PAS. Verbal intelligence test scores alone were significant predictors of pupil performance on the ACH and SSIT.

It was concluded that the expository method of teaching elementary social studies effected more successful pupil performances on a structured-response achievement test, and that a depth-study strategy which relied heavily on the use of group work was effective in the formation and maintenance of a positive self-concept by the learner.

9. Parker, Daniel Webster. An Analysis Of the Social Studies Program In Selected Elementary Schools Of the Bureau Of Indian Affairs On the Navajo Indian Reservation. University of Idaho, 1972. 172p. 72-30,512.

During the past decade, renewed interest in education has brought a fresh concern for the instruction of Indian youth. Research indicates that Indians, as a group, have educational needs which are considerably greater than that of many other participants in the dominant Anglo culture.

This study was to answer certain questions concerning the social studies program in Navajo Indian elementary schools sponsored and supported by the Bureau of Indian Affairs.

Data were obtained from eighty-six copies of a specially devised research instrument which were completed by teachers in grades five, six and seven of various Bureau of Indian Affairs elementary schools on the Navajo Indian Reservation in Arizona, Utah, and New Mexico. The research instrument responses were tabulated and the data were analyzed to reveal the characteristics of the social studies area of the curriculum as perceived by teachers of the Navajo children. Special consideration was also given to the preparation of the teachers for teaching social studies, the physical facilities most closely related to the instructional program, and to curriculum materials provided for teaching purposes.

The study revealed that the Bureau of Indian Affairs elementary schools serving students of the Navajo Indian Reservation were generally making very little contribution toward preparing the Navajo children for citizenship in either the Navajo culture or the dominant Anglo culture by means of the present social studies curriculum or educational staff.

Only one area in the study could be construed as presenting a positive element in the educational program; the physical facilities of the schools were generally substantial.

Factors in the program which were considered inadequate included the following; The number of Indian teachers involved in the program; classroom organization; school enrollments; class loads; teaching experience of teachers; staff retention and teacher turn-over; experience of teachers with other disadvantaged groups; academic preparation of teaching staff, pre-service and in-service education provided by Bureau of Indian Affairs staff membership in professional organizations; textbooks and other textual materials; current periodicals and reference materials; libraries for professional staff; audio-visual equipment; student libraries; content and sequence of the social studies; field trips and outside resources; and the evaluation of educational program by teachers and other agents.

10. Sandoval, Alberto. Treatment Of Contemporary Mexican Americans In Selected Fifth Grade Social Studies Textbooks. The University of New Mexico, 1972. 83p. 73-1555.

The purpose of this study was to content analyze thirty fifth grade social studies textbooks to determine the treatment that these books gave to contemporary Mexican Americans.

The Marcus and Kane list of categories (inclusion, balance, validity, unity, concreteness, comprehensiveness, and realism), for evaluating treatment of minority groups, was used by the researcher to analyze that portion of the text in each book that had content on the Mexican American.

The criteria was applied to each pertinent portion of the text in an identical way. After each book had been examined, a numerical rating was given for each book.

The books were divided into two periods (1962 to 1967, and 1968 to 1971), which roughly corresponded to the State Textbook Division's six-year adoption period.

The study indicated that out of thirty books examined, only eleven had any material which was pertinent to the treatment of the Mexican American.

Out of a possible rating of twenty-one points, one of the eleven books had a twenty rating; two books were rated at eighteen; two books rated at sixteen; two books were rated at fourteen; two books rated ten; and two books were scored at nine.

Of the thirty books examined, only two had all seven of the categories included in those topics which referred to the Mexican American. The rest of the books included from two to six categories. Nineteen of the books examined had no entries related to the Mexican American. In computing the total number of pages (10,208), of the books examined, only twenty-one pages had items containing content related to the Mexican American.

With minimal exceptions, the textbooks reviewed by this study do not include the Mexican American as a significant group in American society. In at least nineteen of the thirty textbooks reviewed, the Mexican American has replaced the black man as the "invisible American."

11. Sprague, Arthur William Jr. Attitudinal Changes In Secondary School Students As A Result Of Studying An Ethnohistory Of the Kiowa Indians. The Ohio State University, 1972. 181p. Adviser: Professor Robert E. Jewett. 73-2136.

The underlying premise of this study is that anthropology should become an integral component in the modern secondary school curriculum. To that end, the purpose of this experiment is two-fold: (1) to gather together primary and secondary source material, historical and anthropological, useable for a senior high school American history class for the study of the Kiowa Indian tribe's culture and history in relation to and in contact with whites up to 1902 and (2) to assess the effects of the study of these materials on students' personal tolerance and attitudes in general and specifically toward American Indians.

The following four hypotheses were tested in this experiment: (1) students' attitudes in general become less dogmatic as a result of their study of a foreign culture; (2) students' attitudes toward the people of the foreign culture studied became more tolerant as a result of the study; (3) change in individual student's attitudes is not related to his mental abilities; and (4) students become more understanding of their own culture as a direct result of understanding a foreign culture.

The three week teaching unit on the Kiowa Indians consisted of a compilation of seventy-seven source materials, including whole or excerpted monographs, newspaper articles, statutes, treaties, Supreme Court decisions, government reports, letters, maps, posters, and legal documents, all of which were duplicated for the students.

To test the first hypothesis that students become less dogmatic, students were given a revised Rokeach Dogmatism Scale as a pre-test, a first post-test immediately following the unit's completion, and a second post-test four months later. It was found that the teaching unit had little effect on the experimental group's collective dogmatism; thus, the hypothesis was proven invalid. The second hypothesis that students become more tolerant of those whom they studied was tested by administering to the experimental group (at the same times as the dogmatism scale) a forced-choice, paired comparison item questionnaire in which the students designated their preferences among twenty ethnic and nationality groups, including American Indians. There was shown to be a slightly significant increase in tolerance of the Indians on the post-tests. Therefore, the second hypothesis was found to be valid, though not impressively so. In addition, students were asked about their own values at the time of each completion of the forced-choice, paired comparison questionnaire; but there was not discovered to be any significant alteration as a result of the unit in the students' values, which tended to be "self-oriented" as compared to the "group-oriented" values of the Kiowa. The third hypothesis that there is no correlation between mental ability and change in dogmatism was tested by comparing the students' three dogmatism scale scores with their respective scores on the Otis Quick-Scoring Mental Ability Test (Beta Test) and the National Educational Development Tests. Correlation among the scores was found to be a chance relationship; therefore, the hypothesis was proven valid. To test the fourth hypothesis, upon completion of the unit the students were asked to specify ten pairs of institutions, customs, procedures, etc., from both the Kiowa and traditional white cultures, the individual members of each pair serving identical functions. Subjective judgment by the experimenter established the appropriateness of the students' responses and additionally the validity of the hypothesis that students do, indeed, become more understanding of their own culture as a result of understanding a foreign culture.

While the success in proving the hypothesis was partial, additional experimental units and research should be produced and performed with the object of effectively incorporating anthropology into the secondary school curriculum.

12. Troutman, Benjamin Iber Jr. The Impact Of Race, Caste, and Prejudice On the Ethnic Attitudes Of High School Students: A Multimethod Assessment. University of Georgia, 1972. 184p. Supervisor: Marion J. Rice. 72-34,156.

The purpose of this research was to assess the impact of the University of Georgia Anthropology Curriculum Project's ethnic relations unit, Race, Caste, and Prejudice, (RCP) on the ethnic attitudes of high school students. A multimethod assessment was employed, including the use of nonparticipant observation. This follow-up study of Kleg's (1970) initial assessment retained his RCP cognitive-affective instrument and added an investigator-constructed semantic differential scale to measure attitude change. Analysis of covariance, with pre-test scores on the cognitive-affective and semantic differential scales as the covariates, was used to assess the treatment effects and the interaction effects of treatment and sex and treatment and socio-economic status.

The research design was Stanley and Campbell's nonequivalent control group design with a pre- and post-test. The subjects were 157 white and 10 black experimental students and 103 white and 7 black control students from two high schools in Northeast Georgia. Since the attitude assessment instruments were basically designed to measure white attitudes toward blacks, the test scores of the 17 blacks in the sample were not included in the statistical analysis. However, discussion of black student response to RCP was an integral part of the ethnographic commentary. The ethnographic reporting in this study apparently marked the first attempt of an ethnic relations project to report in-depth nonparticipant observational data of the actual curriculum implementation.

Statistical analysis indicated significant difference in ethnic attitude changes as measured by the cognitive-affective scale at the .05 level. At the end of the treatment period the experimental group held more favorable attitudes. The interaction effects of treatment and socio-economic status and treatment and sex were not significant.

Of the 14 concepts rated on the semantic differential scale, 5 indicated a statistically significant difference between control and experimental group. The interaction effect of treatment and socio-economic status was found to be significant in only one case. The interaction effect of treatment and sex was significant on three concepts with experimental females holding the most tolerant attitudes on the concepts of Interracial Dating and Jews.

The ethnographic component consisted of the following data sources: (1) nonparticipant daily observation of classrooms; (2) informal student feedback; (3) unstructured interview with a random sample of experimental group students; (4) informal teacher feedback; and (5) formal teacher evaluation conference. These data sources indicated a favorable reception and rating of the materials by the students and teachers who used them. However, both students and teachers felt that the material was difficult, particularly the first chapter which deals with a discussion of race from a physical anthropological standpoint. Nonparticipant observation also indicated that situational factors, such as the ethnic composition of the classroom, affected white and black student reaction to the material.

In conclusion, the unit appeared to stimulate favorable ethnic attitude change, as measured by the cognitive-affective scale, semantic differential scale, and nonparticipant observation.

The teachers who taught RCP felt that the unit fostered a more mature student approach to the study of controversial issues and that the unit had laid the foundation for future modification of unfavorable ethnic attitudes.

13. Chatburn, Dean Nimrod. The Influence Of Selected Kindergarten Programs On Pupil Achievement In Language, Social Studies, and Mathematics at the First Grade Level. 109p. Major Professor: Dr. Malcom Allred. 73-13,291.

Does previous attendance in kindergarten influence a student's achievement in the first grade? Despite the surge of interest in early childhood education during the last decade, there have been few studies that have dealt or treated more than one academic area in the same study.

The primary objective of this dissertation was to determine if students who have attended kindergarten score higher in the first grade on standardized tests in the areas of mathematics, language, and social studies than pupils who have not attended kindergarten when initially tested, when tested after six months, and which students (Model Cities Kindergarten, private kindergarten, or no kindergarten) made the greatest gains.

Three tests were administered during the course of this study. The TOBE, Form K, was given in September, 1971. The California Short-Form Test of Mental Maturity was given in November, 1971. The TOBE, Form L, was given in February, 1972. Three different groups with different preschool experiences were used for this study. The children in this study were those with Model Cities Kindergarten experience, private kindergarten experience, and those without kindergarten experience.

Conclusions

Students who have had Model Cities Kindergarten experience and private kindergarten experience score higher unadjusted and adjusted mean standard scores in the areas of language and social studies on standardized tests (TOBE) when initially tested than do students without kindergarten experience. In the area of mathematics, the unadjusted and adjusted mean standard scores for the private kindergarten students were higher than those for the no kindergarten students. The unadjusted mean standard score for the no kindergarten students and Model Cities Kindergarten students is the same. The adjusted mean standard score is higher, however, for the no kindergarten students than for the Model Cities Kindergarten students when tested initially at T-1 on standardized tests (TOBE).

It would appear that the initial advantage enjoyed by the Model Cities Kindergarten and private kindergarten students in the areas of mathematics and social studies as a result of having had this experience, for the most part, disappeared after six months in the first grade. In the area of language, the Model Cities Kindergarten experience may have made a difference since the unadjusted and adjusted mean standard scores were higher than those of the no kindergarten students. This difference may have been brought about by the developmental nature of the Model Cities Kindergartens.

It would appear that those students having attended kindergarten fair better in the first grade in the area of mathematics, where they suffered less relative loss. In the area of language, it appears that the students without kindergarten experience have the advantage. This advantage is small when compared with the Model Cities Kindergarten students. However, when compared with the private kindergarten students, their advantage is somewhat greater since the private kindergarten students sustained a relative loss between T-1 and T-2. In the area of social studies it would appear that the students without kindergarten experience faired better since they suffered less relative loss than did those having had Model Cities Kindergarten and private kindergarten experience.

Black Studies

14. Connolly, Michael Neil. Students' and Teachers' Opinions Of the Existing Programs For the Study Of Black Americans In Michigan High School Social Studies Curriculums. Michigan State University, 1972. 201p. 73-12,694.

The purpose of this study was to locate existing programs in Michigan high school social studies curriculums that specifically dealt with the study of black Americans, and to survey students' and teachers' opinions concerning these programs.

Students' opinions in schools that offered a separate course concerned with the study of black Americans were compared to students' opinions in schools that specifically included the study of black Americans, but did not offer a separate course. Comparisons were made between students and teachers and curriculum types.

In order to locate the programs a questionnaire was mailed to 400 social studies department chairmen in 29 southern and central Michigan counties.

Schools in the populations were divided into two groups. Those schools that offered a separate course concerned with the study of black Americans and those schools that specifically included the study of black Americans but did not offer a separate course. Schools were further divided by the percentage of black students within a school. Three racial percentage groups, 0-2.99 percent, 3.00-9.99 per cent, and 10 per cent and Up, were set up within the two curriculum types. Two schools were randomly chosen from each group. It was not possible to obtain two schools in the group 10 per cent and Up without a separate course. Reponse sheets were distributed in selected classes to seniors and to all social studies teachers in the ten schools. Response sheets were developed that had both negative and positive statements concerning the program for the study of black Americans. Statements dealt with materials, general objectives, "new social studies" methods, evaluation instruments, and teachers and their instructional methods.

Conclusions

1. A majority (63.6%) of the high school social studies programs in counties in southern and central Michigan specifically included the study of black Americans.
2. Schools with larger percentages of black students were more likely to specifically include the study of black Americans.
3. Schools with larger percentages of black students were more likely to offer a separate course primarily concerned with the study of black Americans.

4. Students as a group were negative when responding to statements concerning their school's social studies program for the study of black Americans.

5. There was no significant difference between students' responses in schools that offered a separate course and students' responses in schools that specifically included the study of black Americans, but did not offer a separate course.

6. Students were most positive towards statements which dealt with: expression of opinions in class; the adequacy of the library; analyzing racial issues important to them; the general treatment of the study of black Americans in social studies; and the adequacy of audio-visual aids.

7. Students were most negative towards statements which dealt with: the adequacy of field trips; the adequacy of outside speakers; the adequacy of textbooks; the extent of the participation in planning by students; and the stimulation of this study for further study outside of class.

8. Students as a group were significantly more negative than teachers towards their existing program of the study of black Americans.

9. Students and teachers were similar when compared by statements that received the most positive or negative responses within each group. The statements which dealt with expressions of opinions in class, the adequacy of the library, and the adequacy of the audio-visual aids were included in the five statements receiving the most positive responses from both teachers and students. The statements which dealt with the adequacy of field trips, the adequacy of outside speakers, the adequacy of textbooks, and the participation in planning by students were included in the five statements receiving the most negative responses from both teachers and students.

15. Davis, George Arliss. Secondary School Geography: Its Relevancy To Black Students. The Ohio State University, 1972. 167p. Adviser: Professor Robert E. Jewett. 72-26,996.

This is a study designed to investigate: (1) The effects of racism in public schools on the egos of Black youth, (2) the treatment of Blacks in selected geographic materials; and (3) how geography can be made more relevant to Black students. To accomplish the task, this writer (1) reviewed psychological and sociological literature to study the effects of racism on the egos of Black youth; (2) developed criteria for the analysis of geographic materials; and (3) analyzed selected geographic materials to evaluate their treatment of Blacks; and (4) constructed geographic materials with a Black focus to be taught by the inquiry method.

The literature review of the findings of psychologists, psychiatrists, educators and sociologists strongly indicates, by commission and/or omission, that subject areas taught in secondary schools contribute to the negative self-image held by Black students. Historically, the problem was first documented in 1935 and continues to be documented in current literature.

Psychologists say that Black students do not feel that they belong because there is so little content which refers to them in a positive sense. Sociologists explain that Blacks have been systematically excluded from the social and political arenas, therefore, their abilities to solve their own problems have been limited. The content in most text materials reinforces status quo by excluding controversial issues and topics of major concern to Blacks.

It was concluded that geographic materials should meet the following criteria in order to be relevant to Black students:

1. Content that is composed of topics significantly relevant to the Black community.
2. Content that deals with real social and political problems of Blacks in the United States, as well as proposes reasonable solutions.
3. Content that can be useful in the lessening of ethnic hostilities and conflicts.
4. Content that augments the ego of Black students by including positive aspects of the Black experience.

Four textbooks and the High School Geography Project materials were measured by the criteria. The content of two of the textbooks contained no topics specifically relevant to the Black community. In fact, there was no mention of the presence of Black in the United States in either text. The same two books discussed no social issues in the United States, but treated racial problems in South Africa. One book did mention Negroes, but failed to deal with issues, therefore, it was not significantly relevant to Black students. In the fourth textbook, Black Americans play an integral part in the content, and in pictures, representing a variety of positive roles. This textbook develops topics significantly relevant to Black America, and deals with both social and political problems as well as reasonable solutions for the Black community.

The High School Geography Project utilized the inquiry teaching strategy, and met the criteria at a minimal level. Some of the content was relevant to the Black community; it included real social and political problems, which may lessen ethnic hostilities and conflicts and may augment the self-concept of some Black students.

Once the shortcomings of geographic materials were obvious, it was necessary to demonstrate what this writer considered relevant geographic materials and methods. First, a careful inquiry was developed to encourage the use of reason, evidence, inference and generalizations. Then episodes in the geography of Black America were created as examples of relevant geography. The specific content was designed to serve as a contribution to the knowledge of students by shedding light on selected spatial aspects of Black America, which have suffered from benign neglect at the hands of geographers. It was further hoped that the episodes would serve as a model for teachers who wish to pursue, in behalf of their students, the teaching of the geography of Black America.

16. Fisher, David L. Black Studies and the Enhancement Of Self-Concept As It Relates To Achievement Level In Negro High School Students. Western Michigan University, 1972. 85p. 73-9750.

This study has as its primary purpose the investigation of the effect of black studies courses upon the self-concept of Negro high school students. Specifically, it was intended to determine if self-concept enhancement followed completion of black studies courses and if this enhancement effect was further related to prior academic achievement. A secondary purpose was to determine if self-concept enhancement was related to the sex of the student. There were two subsidiary purposes. One was to see if different black studies courses had different effects upon the self-concept of the students and the other was to determine if the four instruments used were independent measurements of differing aspects of the self-concept.

The instruments used were the Self-Concept of Ability Scale which yields a measure of the student's perception of his ability to achieve in the academic aspects of school, the Personal Control Scale which yields a measure of that aspect of the self-concept that is involved in an individual's view of himself that is reflected in his feelings about internal versus external controls, the Delay of Gratification Scale which measures that aspect of the self-concept related to the individual's willingness to forego immediate rewards for the sake of later increased rewards and a Self-Concept Semantic Differential which yields a measure of the favorableness of the self-concept on several evaluative scales.

The subjects used were Negro high school seniors in a large, urban, integrated high school. Those students who had elected one of two black studies courses offered were included. Those assigned to a black studies course the first semester made up the experimental groups while those who were to take a black studies course the following semester were the control groups. Pretest and posttest administrations of the four instruments were provided for all students and a percentage change score was computed for each student for each of the four instruments. These scores made up the dependent variables.

The relationships between treatment groups and the relationships among treatment groups and the independent variables of sex and level of achievement were analyzed using a two-way analysis of variance model. Correlation matrices were used to determine the degree to which instruments yielded independent results and the comparative effect of the two black studies courses was studied in a descriptive fashion.

The data obtained in the study, when analyzed, indicated that while black studies might have self-concept enhancement effects that they did not affect all the measured aspects of self-concept and that the effects were not always in the desired direction. It was concluded that black studies, as a curriculum tool for self-concept enhancement, should be approached with caution. The instruments used did measure different aspects of self-concept and that one course, Afro-American History had a greater effect upon self-concept than did Black Literature, the other black studies course.

17. Giles, Raymond H. Jr. Black and Ethnic Studies Programs At Public Schools: Elementary and Secondary (with) Volume II: Appendices University of Massachusetts, 1972. 379p. Director: Dr. David Evans. 73-6465.

Operating on the premise that the public schools are the major purveyors of American traditions and cultures and therefore that racial prejudice and discrimination should be addressed through the educational system this study examined the operation of various ethnic and black studies programs and their impact on racial attitudes. The major purpose of the study was to collect data and information related to the assessment and improvement of these programs in order to propose new strategies and more relevant content and approaches for in-service teacher education programs, establish new projects in the public schools, and evaluate the impact and effectiveness of such programs.

A scrutiny of the two philosophies operative in the black studies field, separate courses versus curricular revision, was followed by a survey of three elementary African heritage classes in Harlem that were given an open ended written questionnaire to determine their impressions of the attitudes towards Africa. Excerpts from taped interviews and discussions with three classes are included for an in-depth look at the attitudes underlying the written responses.

At the secondary level a survey of twenty-five programs throughout the country was made and eight representative case studies were isolated and presented in detail. These case studies include separate black studies courses in both traditional and experimental predominately white schools for black students only, separate courses in minority studies for white students, required black history courses in all black high schools, integration of black studies into the regular school curriculum in all black high schools serving a ghetto, black studies programs in predominately black high schools serving a middle class community, and a white teacher of black history in an all black high school. Each of these case studies examines and present factors which relate to the strengths as well as the weaknesses of programs in each situation with the aim of providing insights to help administrators consider problems which might arise from similar situations as they attempt to establish such programs.

The curriculum guides from sixteen school districts were analyzed in depth to better understand how those districts suggest black studies be handled. Contributionism, black identity, and a thematic approach emerged as three distinct approaches to the teaching of black studies. Again both the fallacies and strengths of each approach are explored within the educational setting and as they relate to the stated goals of each program. It was further found that the guides as they exist are not often used in practice. The curriculum guides were also measured against the expressed needs and interests of black students where such needs were openly stated. It was found that the needs of the black community are infrequently considered or understood by persons responsible for the development of course outlines.

The problems of assigning black teachers to teach black studies regardless of that teacher's training and the use of these teachers to counsel black students in predominately white schools is discussed.

The study raises a number of questions calling for varied interpretations and definitions of a black studies (each equally valid), a look at the origin and sponsorship of black studies programs, the need for clarifying their purposes within diverse settings, and who should teach and who should take black studies as well as the need for broader representation of interests and student needs in the development of each program. Much of the solution is seen to be in teacher preparation. Curriculum reform and adequate evaluation techniques for measuring the impact and effectiveness of black studies programs are also discussed as well as alternatives to the educational problems to which black studies are considered a panacea.

18. Kent, George Robert. A Survey Of Integrated and Separate Black Studies In Maryland Secondary Schools, Grades 10-12. University of Maryland, 1972. 230p. Supervisor: Dr. Richard T. Farrell. 73-11,393.

During the decade of the 1960's, black Americans insisted that the curriculum of the schools failed to reflect conditions unique to blacks. They demanded Black Studies, and educators responded with a variety of programs. Generally, these programs were of two types. They provided curricular offerings in Black Studies through typical courses in the curriculum or through separate courses designed to treat the black experience. This study examined integrated and separate Black Studies offerings in Maryland secondary schools, grades 10-12.

The major purposes of the study were: (1) to ascertain the extent to which integrated and separate Black Studies were introduced into the secondary schools, grades 10-12, in Maryland; (2) to describe curricular offerings in separate Black Studies in these schools; (3) to test two hypotheses concerning differences in areas of emphases between integrated and separate curricular offerings in Black Studies.

To achieve these purposes, the researcher utilized questionnaires to obtain data from two groups of Maryland educators. One questionnaire solicited information from principals to describe some general characteristics of Black Studies within the limits of eleven research questions. A different questionnaire requested data from teachers of selected courses in the social studies to test two hypotheses. Questionnaires were mailed to 149 principals, and 786 teachers in Maryland secondary schools, grades 10-12.

Questionnaires were returned by 107 principals. Fifty-five reported that their schools offered integrated Black Studies, and fifty-two indicated that their schools had separate Black Studies courses. Larger schools offered more separate courses than smaller schools, and nonrural schools had more separate courses than rural schools. More than eighty per cent of the schools reported having fewer than thirty-three per cent black students in the total enrollment. In these schools integrated and separate offerings were nearly equal. Black Studies were integrated predominantly in social studies courses, and the most frequently offered course was Black History. Thirteen other separate courses were listed, but few schools offered them. The schools have had separate courses for less than four years, and school administrators, teachers, and students were largely responsible for the initiation of Black Studies into the schools. Teachers had some training in Black Studies through participation in workshops, in-service programs, and formal courses relevant to Black Studies.

Questionnaires were received from 352 teachers. Data reported by these teachers were utilized to test two hypotheses relating to the degree of emphasis given to the following areas of emphases: Contributions of Blacks to America, Slavery, African Background and Culture, and Current Problems and Issues Concerning Blacks in America.

The first research hypothesis was stated: There is a difference in curricular emphases on topics relevant to Black Studies between offerings integrated into regular or typical social studies courses and those taught as separate Black Studies courses. The results of four tests in which the analysis of variance procedure was applied to each area of emphasis revealed that the data supported the research hypothesis.

The second research hypothesis was stated: There is a difference in curricular emphases on topics related to Black Studies between schools of varying black-white racial compositions. The analysis of variance procedure was applied to each of the areas of emphases utilizing scores for teachers in three groups of schools with varying racial compositions. The results indicated that the data supported the research hypothesis.

19. Kiah, Donald Allen. An Identification Of Black Studies Programs In the State of Maryland With Emphasis On the Black Studies Program In the Public High Schools Of Prince Georges County, Maryland, As Perceived By Principals, Teachers, and Students In the Spring Semester Of 1970-71. The George Washington University, 1972. 271p. 72,19,731.

The purpose of this study was to identify the current status of Black Studies programs in the State of Maryland and more specifically to examine how the program was perceived by principals, teachers, and students in Prince Georges County. The study focused attention on the following areas (1) curriculum, (2) personnel, (3) organization, and (4) evaluation.

Data for this study were obtained from the state and its 24 local school systems by use of a letter of inquiry and an interview instrument which consisted of 22 questions. The perception data, involving only Prince Georges County, were gathered by utilization of three questionnaires which were designed only to collect information on how Black Studies was perceived by principals, teachers, and students involved in the program.

Findings

1. The state, by means of policy and legislation, was found to have provided for programs dealing with the black experience. Ten of the 24 school systems provided for Black Studies, as a separate program. The majority of these programs consisted primarily of a course in black history.
2. There were 63 high schools in the state with Black Studies. Most of the programs were initiated because of student demands; however, there is little evidence of student participation in planning and program design.
3. Few systems had developed their own curriculum guides, and while flexibility is desirable in content, methods, and materials, the programs appeared excessively variant in these elements, both among school systems and within school systems.
4. The data studied indicated an apparent need to improve both the election process and training process of teachers for the program.
5. There was no evidence in the state of any type of formal evaluation of the elective Black Studies program.
6. The findings in Prince Georges County supported the following: (a) the majority of the individuals in the program were black, middle class students preparing for college; (b) the program content stresses contemporary problems and history; and (c) the principals, teachers, and students gave a better-than-average over-all evaluation of the program.

Recommendations

1. The state should provide for an expansion of Black Studies programs in all school systems of the state.
2. The state should provide some minimum standards and guidelines and direct all school systems to comply.
3. The state and local school systems should provide for teacher training and for opportunities for in-service experiences in

the area of Black Studies.

4. Increased white student enrollment should be encouraged. The Black Studies program is needed by all students.

5. The state should ascertain how well the contribution of blacks is being integrated into the regular curriculum of local school systems.

6. Prince Georges County should improve the availability of materials, and the program by varying the content and length of the course offerings, and provide each school having a Black Studies program with a teacher who is based full time in that school.

20. Polk, Travis Ray. The Status Of the Teaching Of Negro History In the Public High Schools Of Texas. North Texas State University, 1972. 149p. 72-24,201.

The problem with which this study is concerned is determining the status of the teaching of Negro history in American history classes in the public high schools of Texas. Efforts were made to obtain information relative to the (1) organization of Negro history for instruction, (2) objectives teachers consider most important in teaching Negro history, (3) kind and extent of preparation for teaching Negro history, (4) evaluative procedures employed by teachers, (5) instructional materials and methods which teachers used most extensively, and, (6) the extent of opposition to teaching Negro history as perceived by the teachers.

The data for this study were obtained by use of a questionnaire. Five hundred and fifty-seven questionnaires were mailed directly to a random sample of public high school American history teachers located throughout the state of Texas. Two follow-up letters and questionnaires were sent at two-week intervals to those who failed to return the initial questionnaire. The sample consisted of American history teachers from each of the five high school classifications established by the Texas Interscholastic League. Fity-five per cent of the teachers responded to the questionnaire.

Based on the information provided by the teachers participating in the study, the following conclusions relative to the teaching of Negro history in the state of Texas have been reached.

1. A majority of the American history teachers in the public high schools of Texas beleive that Negro history is a significant part of American history and that Negro history is beneficial to their Caucasian as well as their Negro students.

2. A majority of the American history teachers believe that teaching Negro history will help to reduce interracial tensions and that the Negro child's self-concept would be improved through a study of his heritage.

3. A majority of the American history teachers believe that Negro history should be integrated into the American history course, rather than being taught as a selective, elective course.

4. A majority of the American history teachers consider the development of an understanding of the intercultural responsibilities of American citizens to be the most significant objective in teaching Negro history.

5. A majority of the American history teachers lack sufficient preparation for teaching the role of the Negro in American history.

6. More of the American history teachers in larger metropolitan areas tend to be more concerned with teaching Negro history than do American history teachers in the smaller communities or rural areas.

7. There is a more extensive use of supplementary and audio-visual materials on Negro history in the larger schools than in the smaller schools.

8. A majority of the American history teachers believe that the coverage accorded the Negro is inadequate in the most recent adoptions of American history textbooks in Texas.

9. Teachers attempting to initiate a study of Negro history will be confronted with minimal opposition to their efforts.

10. A majority of the American history teachers perceive teaching about the Negro and civil rights as more urgent than teaching other areas of Negro history.

11. A majority of the American history teachers believe that there is no need for special methodology in teaching Negro history.

21. Wardrop, Gwendolyn Kay Chalk. Afro-American History: A Revision and Critique. Wayne State University, 1972. 604p. Adviser: August Kerber. 72-28,503.

The general purpose of this dissertation is to write a unified, integrated history of the Afro-Americans for use on the high school level. Though the content will be focused on Black history, the aim will be to achieve the highest degree of objectivity. The author's intent is to avoid slanting toward either the Black or White aspects of the data and to include areas which have been neglected in the Black history books written thus far.

As an educator, I became concerned because, although most of the basic scholarship in history has been White, the interpretation has been Black, as that term is used in Black mythology. In order to make up for what the Blacks feel is 400 years of White racism, cruelty and neglect, emphasis among the White and Black authors has been primarily slanted toward a Black view of history. The roles of the Whites, who either tried to put an end to slavery or make the lot of the Black easier under the institution, has all but been ignored or negated. Aid given to the Blacks, or appreciation of the Blacks as persons or as a people by the Whites since the Civil War has also been all but ignored or negated. Most of the Black history written thus far deals with one period of Black history and lacks comprehensiveness.

A most common motivation for the study of Black history has been the desire of the Black community to find a more acceptable identity. It is only natural that the militant Blacks, in their search for a new Black identity, would tend to treat historical facts in a way calculated to create the new acceptable identity, in the same way as Whites of various ethnic groups who were similarly in need of upgrading themselves in the American socioeconomic heap.

History has been used as an instrument of nationalistic purpose in Russia, Germany, Maoist China, and in countries where prevailing ideology requires a history consistent with their own beliefs. The test of a good history book should be that it is fair and objective in its selection of facts from the total universe of data available concerning recent history.

In this dissertation the author attempts to answer non-hypothesized questions. These are:

1. What is the best approximation of truth concerning the events transpiring under the institution of slavery?
2. What have been the conditions under which the Blacks have lived since the freeing of the slaves in the Civil War period?
3. What have been the significant trends and developments in Black and White thinking since the Civil War?

The main sources of data for the study formed what could be considered an almost infinite universe composed of official documents and written accounts located in:

1. The Detroit Public Library, and the libraries of Wayne State University, mainly, and other locally available libraries.
2. Books and magazines purchased by the author.
3. Taped lectures by Station WDET, in Detroit.
4. Written material presented in the 1968 Black History Workshop at Wayne State University.

The author has examined systematically the sweep of Afro-American History from African antecedents to the present. It seems clear that we are living with a past historical heritage, which poses more problems to the unity of America than it answers. It is hoped that the examination of the vast universe of data may suggest directions in the further development of the democratic tradition.

If I have learned anything from this undertaking it is that we must be bold in our sociological thinking in order that we may deal constructively with the terrifying crises posed by racial conflicts that threaten to tear the fabric of our society to shreds. I hope that what we have learned from the past may be applied fruitfully to the present Black-White crisis. We hope that with intelligent understanding and courage, a more unified and democratic America may emerge.

22. Williams, Willie Lee. Curriculum For Teaching the Black Experience Through Music and Dramatic History. University of Massachusetts, 1972. 136p. Chairman: Dr. Gloria Joseph. 73-7111.

During the past two decades, the plea from Black students and the community has been to obtain an effective Black studies program. These voices have spread to the colleges, universities, and the public schools. Their plea has led many administrators and teachers to implement some form of a Black studies program.

The results have left many questions unanswered, such as:
1. When should I begin teaching a Black studies program?
2. When should I begin teaching about the Negro and race relations? 3. What methods can I use to teach Black history?
4. What resources are available for the teaching of the Black experience? 5. How can I obtain them? 6. Should I teach Black studies separately or as a part of my regular school curriculum?

A flood of material on the Black experience has been produced in recent years. Abundant material, however, does not in itself solve the classroom teacher's pedagogical problem. He must determine how the materials can be most effectively used to attain the objectives that he has formulated. The intent of this study is to prepare a curriculum for incorporating the Black experience in the classroom.

Various components of this curriculum have been tried throughout the New England area. As a result of these trial efforts, an improved curriculum will be developed that advocates a mandate for change in education today in regard to an innovative approach for incorporating the Black experience in the public schools curriculum.

The main content of this study will be based upon a proven curriculum in music and drama. The courses will be set up in a manner that will enable students to achieve success early in their classroom experiences. The main theme will be the incorporation of the valuable contributions of the Black artist.

This kind of integration must be implemented into the school systems because the American Black will be living tomorrow with the very people against whom he is struggling today.

The primary purpose of this study is to delineate a curriculum that will help teachers present the truth about Black history in the classroom. The curriculum will consist of three parts: 1. Music identity collage concept. 2. Historical drama. 3. Social implications through drama.

This study and proposed curriculum guide is to show the reader that sutdents can be more honest about their feelings and their complexities, and recognize that their responses and attitudes when confronted by the facts of race are a peculiar combination of the particular and the general. Their attitudes are uniquely theirs, but they are very like the humorous responses of others.

In view of ever-changing curriculums and relevance of racial attitudes throughout the country, this study is based upon experimentation in the Springfield School System in Springfield, Massachusetts in 1971 and 1972. However, it is proposed that it can be implemented in any school system seeking innovative education.

Mathematics

23. Bryson, James Robert. The Design and Evaluation Of A Program For Low Achievers In Ninth Grade General Mathematics. The University of Mississippi, 1972. 128p. Director: Associate Professor Harold C. Hein. 72-20,227.

The purpose of this study was to determine effects of specifically designed curricular materials and activities upon the achievement and attitude of students enrolled in ninth grade general mathematics. This study reports on the development, implementation, and evaluation of a general mathematics curriculum designed for relevance as to style, sex, and cultural interests of the general mathematics students in a southern high school.

Procedure

Members of the staff of Daniel High School, New Albany, Mississippi, including two teachers of mathematics, the high school principal, and the director of instruction designed student problems and prepared special materials during the summer of 1970 for use during the fall term by an experimental group.

Relevant topics to be included in the curriculum were selected with assistance from a university consultant and school staff members in vocational and pre-vocational education. Much of the semester's work was designed in such a manner that it would provide review and strengthen skills in the four basic operations with integers. Original "word" problems considered relevant to the situation were written by the committee. The experimental curriculum was divided into units of work called "contracts" which were further subdivided into lessons designed to meet the specific objective of each contract. Educational games and field trips were included in the experimental program as enrichment activities. No homework was assigned the experimental group, and the only test given was a semester examination developed by the respective teachers.

The traditional textbook approach was used with a control group, and very few verbal problems were included. Educational games were not used extensively by the control group, but members were allowed to go on meaningful field trips. Grades for the traditional course were based upon homework, tests, and the semester examination.

The sample consisted of four classes which involved all students enrolled in ninth grade general mathematics in the Daniel High School, during the first semester of the 1970-71 school year. Students selected for enrollment in ninth grade general mathematics were those who failed to meet the criteria set for a first course in algebra. A randomized block procedure involved grouping the students by race, sex, and raw scores on the Orleans-Hanna Algebra Prognosis Test, and then randomly assigning them to individual classes.

Two teachers were each assigned one control class and one experimental class of ninth grade general mathematics. The duration of the study was the first semester (18 weeks) of the 1970-71 school year.

The Metropolitan Arithmetic Test, Advanced Level, was given as a pretest and posttest to measure achievement gain during the semester, and the Mathematics Inventory was utilized as a pretest and posttest to measure change in student attitude. Appropriate t-tests were used to determine significance of differences.

Conclusions

1. The achievement gain in ninth grade general mathematics was not affected significantly by utilizing the experimental curriculum. Both the experimental and control group showed a significant increase in achievement at the .001 level during the semester. The greater spread in posttest scores of Negro students in the experimental group as compared with the control group indicates the experimental curriculum may be more effective than the traditional curriculum.

2. Changes in attitudes were a function of the type curriculum used. A mean decrease of 1.24 points in attitude was found for the experimental group, and a mean increase of 5.72 points was reported for the control group. Statistically, at the .05 level, the experimental group showed no significant change during the semester, but the control group experienced an increase which was significant at the .01 level. Further analysis indicated considerable variation in the amount of change between classes for both the experimental and control group.

24. Everett, Douglas Lavelle. The Effects Of Tutoring On Achievement In and Attitude Toward Plane Geometry By Second Semester Tenth Grade Students. University of Southern Mississippi, 1972. 54p. 72-26,538.

Tutoring has been employed in one form or another for a long time. Through the years there has been widespread belief that tutoring helps the tutee achieve at a higher level. Very few empirical studies to determine if tutoring helps the tutee have been reported. Even fewer studies have been reported that attempted to measure the effects of tutoring in the affective domain.

The purpose of this study was to determine if second semester tenth grade plane geometry students who have access to tutorial help from junior college students achieve at a significantly higher level and have a significantly better attitude toward plane geometry than second semester tenth grade geometry students who do not have access to tutorial help.

The problem is stated in specific terms by the following hypotheses:

1. Students who have access to tutoring achieve at a higher level than those who do not have access to tutoring;
2. Students who have access to tutoring have a better attitude toward plane geometry than those who do not have access to tutoring;
3. When the achievement scores are grouped according to the ability level and the sex of the students, students who have access to tutoring have higher mean scores than those who do not have access to tutoring;
4. When the attitude scores are grouped according to the ability level and the sex of the students, students who have access to tutoring have higher mean scores than those who do not have access to tutoring;
5. There is a significant effect on mean achievement scores by the interaction between ability levels and treatment;
6. There is a significant effect on mean achievement scores by the interaction between sex and treatment;
7. There is a significant effect on mean attitude scores by the interaction between ability levels and treatment, and
8. There is a significant effect on mean attitude scores by the interaction between sex and treatment.

To test the hypotheses, 154 second semester tenth grade plane geometry students enrolled on the Harris Campus of Meridian High School, Meridian, Mississippi during the second semester of the 1970-71 school year were randomly divided into two groups equal in number. One group was designated the experimental group and the other group was designated the control group. Both groups were composed of students taught by one of two female white teachers. The experimental group had access to tutoring for at least one hour per day by black and one white second year male student enrolled at the Meridian Junior College. The study covered seventeen weeks.

The 154 students were divided into three groups according to ability--high, middle, and low. The composite score on the California Test of Mental Maturity was used to indicate ability.

During the last week of the study the final examination of the Addison Wesley Tests in Plane Geometry, 1969 edition, form A and the Remmers Attitude Toward Any School Subject Scale (short form) were administered to the 154 students.

Three way analysis of variance was employed to determine the interaction effects of the independent variables on the dependent variables. These data did not support any of the hypotheses at the significant level of confidence. However, there were three importtant findings to be reported. The relationship between ability and achievement were significant at the .02 level of confidence. The effect on attitude by the interaction of ability and treatment was significant at the .02 level. The effect on attitude by the interaction of ability, sex, and treatment was significant at the .004 level.

25. Fairman, Billie Jack. The Effectiveness Of A Structured Mathematics Program With Culturally Deprived Kindergarten Children. North Texas State University, 1972. 137p. 73-2901.

This study is limited to the mathematics performance of two groups of culturally deprived kindergarten students, mostly blacks, with a few whites and Mexican-Americans, who were enrolled at Robert E. Lee Elementary School (Denton, Texas) for the entire school year of 1970-71. The purposes of the study are to compare the effectiveness of two methods of teaching mathematics to culturally disadvantaged children and to check for interaction of treatments when these children are classified by sex.

The teacher of the control group used an incidental approach in developing mathematical ideas, whereas the teachers of the experimental group used a structured program.

At mid-year of the experiment a measure of intellectual capacity was obtained for each child individually by administering the Slosson Intelligence Test(SIT).

An assessment of each pupil's mathematical concepts and abilities was also determined at the outset of the study by using the Comprehensive Mathematics Inventory Test (CMI), which was given individually in two sittings of about twenty minutes each. This instrument gave a measure of each child's understanding of (1) sets, numbers, and numerals; (2) measurement of money, time, temperature, length, and weight; and (3) geometry.

At the end of the study, the CMI was used as a posttest to determine the achievement of both the control group and the experimental group.

There was no significant difference between the means of the control group and the experimental group on the Slosson Intelligence Test, and neither was there a significant difference between the means of the two groups on the Comprehensive Mathematics Inventory pretest. As a matter of fact, there was a high degree of correlation between the scores each child made on the SIT and the CMI pretest.

The results reported in this study indicate that the experimental group had significantly greater achievement, as measured by the CMI, than the control group. This significant achievement implies that the structured program was superior to the incidental program in the following ways: 1. The content of the curriculum was broader in scope. 2. A greater variety of materials was used. 3. The various ways of grouping the children for classroom instruction were more flexible. 4. The teaching procedures allowed more opportunity for pupil involvement. 5. The regular time set aside for the daily mathematics lessons gave these culturally deprived children a routine that was much needed as a stabilizing factor.

When the children were classified by sex for the purposes of this study, there was no significant interaction among the treatments.

Since few research studies have concentrated on the development of the kindergarten mathematics curriculum for the culturally disadvantaged, a longitudinal study of this nature would offer administrators and kindergarten teachers the guidelines they seem to lack today when it comes to implementing a vital mathematics program for the five-year-old child.

26. Goldner, Lawrence Ronald. A Study Of the Effects Of Compensatory Instruction In Language Arts and In Arithmetic On Achievement, Study Habits, and Selected Attitudes Of Eighth Grade Students In A Depressed-Area School. New York University, 1972. 389p. Chairman: Professor Virgil A. Clift. 72-26,632.

The purpose of this study was to investigate the effects of compensatory periods of language arts of arithmetic instruction on the achievement (in these subject areas) or two matched groups of eight grade students compared to a third (control) group of eighth graders who did not receive any compensatory instruction. The study also examined the effects of its compensatory program on study habits and selected attitudes of these same students.

The experimental program was conducted in a depressed-area school with a pupil population that was virtually 100 percent Negro. More than 80 percent of the students were below grade-level in reading and arithmetic. The program consisted of three extra hours per week, for 18 weeks, individualized and small group instruction in basic skills. Remediation activities were based upon the diagnosis of each pupil's needs and made up of a wide variety of high interest multi-media, and multi-level material.

One experimental group of 120 students, divided equally into four ability-level classes based upon reading achievement, received additional instruction in language arts skills. A second matched (by reading achievement) experimental group of 120 students received additional instruction in arithmetic skills. The 90 control pupils received no compensatory instruction.

The Iowa Tests of Basic Skills were used to measure achievement language arts and arithmetic. The Survey of Study Habits and Attitude was used to measure changes in study habits and selected attitudes. The analysis of covariance computer program, which was used to analyze the data, adjusted the post-test means to compensate for initial (pretest score differences for each dependent variable examined. Three comparisons were made for each dependent variable considered. The comparisons were: (1) experimental$_1$ vs. control; (2) experimental$_1$ vs. experimental$_2$; and (3) experimental$_2$ vs. control. This approach made possible a more thorough examination of the data related to each hypothesis.

Findings

The investigator hypothesized that: "Students who receive compensatory periods of instruction in language arts (or arithmetic) will evidence greater increments of achievement in language arts (or arithmetic) than students who do not have such compensatory instruction..." A comparison of the performance of the compensatory language arts classes with that of the control classes failed to support the hypothesis. However, comparison (2) showed that the students in the language arts group evidence significantly greater achievement in language arts skills than did the students in the arithmetic group. The language arts program appears to have been most effective with the students having the more serious skill deficiencies in language arts.

Comparison (1), between the compensatory arithmetic and the control classes, failed to support the hypothesis. In comparing the two experimental treatments - comparison (2) - the hypothesis was supported by only one of three dependent variables measured.

The investigator hypothesized that: "Students who receive compensatory periods of instruction...will evidence greater improvement in study habits and selected attitudes than students who do not have such compensatory instruction..." While failing to support the hypothesis, data did show that the experimental groups maintained their pretest levels of the study habits and attitudes scale.

It would appear that a more individualized compensatory education program for some kinds of children in depressed area schools can be beneficial. The fact that many other programs have failed and that certain elements of this program were less successful than others indicates the need for continuous evaluation and restructuring of each segment of individualized curriculum.

The question of how to compensate for the educational deprivation of disadvantaged children is of such great magnitude that a cooperative effort, involving a number of investigaters, is recommended as the best way to provide the most productive research.

27. Hammons, Donald Wayne. Student Achievement In Selected Areas Of Arithmetic During Transition From Traditional To Modern Mathematics (1960-1969). The Louisiana State University and Agricultural and Mechanical College, 1972. 87p. Supervisor: Dr. Sam Adams. 72-28,349.

The purpose of this study was to determine if any significant change in proficiency of students in Caddo Parish, Louisiana in the basic areas of arithmetic computation and reasoning had occurred during the period 1960 to 1969. The period studied was one of transition from traditional to modern mathematics.

The sample of 6903 was selected from the eighth-grade students who attended the schools of Caddo Parish, Louisiana during the school years whose fall semester began in 1961, 1963, 1965, 1967 or 1969. The sample size by year was 1510, 1481, 1338, 1375, and 1199 respectively. Each year approximately forty classrooms were represented. The seven schools for the study were chosen to represent the different socio-economic patterns and the races that existed in the parish. Black students attended separate schools during the period studied and constituted an average of 35 percent of the school population. The sample represented about 30 percent per year of the eighth-grade population of the parish.

Eighth-grade students in the schools of Caddo Parish are administered the California Achievement Test each fall semester. Each year of the study was considered a different treatment of the basic subject area in order to test for differences. The statistical procedure analysis of variance, using the least squares technique, was then performed by computer on the raw scores of all students in the study by year for the five years studied. F-ratios were used to determine significant changes-at the .05 and .01 levels of confidence-of the students in the sample for the basic areas of computation and reasoning.

In order to determine significant trends in proficiency of the areas studied, polynomial regression equations were computed. The year effects were partitioned into individual degree of freedom orthogonal polynomial comparisons. This is a method to examine the equation for predicting the dependent variable-in this case computation and reasoning-on the basis of year trends. F-ratios were the basis for determining trends significant at the .05 and .01 levels of confidence. Graphs of the linear trends were displayed.

Based upon the sample used, the following conclusions appeared to be justified:

1. There was a significant change in proficiency of computation skills of students in Caddo Parish, Louisiana during the period 1960-1969.
2. A significant declining trend of proficiency in computation skills was present in Caddo Parish, Louisiana during the period 1960-1969.
3. A significant change in achievement in reasoning was not found among students in the parish.
4. Significant declining trends of proficiency in computation skills were present in the following schools: Broadmoor, Linwood, Oak Terrace, Carver, and Walnut Hill.
5. Schools categorized as "white" according to the student population had a significant declining trend in computational proficiency.
6. Schools categorized as "black" according to the student population had a significant declining trend in computational proficiency.
7. No school of the sample had an increasing trend in computational proficiency during the period studied.
8. Significant declining trends of proficiency in reasoning were present in the following schools: Linwood, Oak Terrace, and Carver.
9. Significant increasing trends of proficiency in reasoning were present in the schools Linear and Walnut Hill.
10. Increasing trends of proficiency in reasoning were present in schools categorized as "black" according to predominant student population.

28. Isenberg, Robert Leon. A Comparison Of Achievement Scores In Reading, Arithmetic, and Motor Skill Development Among Three Instructional Programs With Different Levels Of Supportive Services For Elementary School Compensatory Education Students. Brigham Young University, 1972. 210p. Chairman: Leland J. Hendrix. 72-32,649.

This study was conducted to determine the effectiveness of an ESEA Title I Compensatory Education Program carried out in grades one through five. It was hypothesized that no significant difference would be found among compensatory education students in achievement growth in reading, arithmetic, and motor skills with regard to the main effects of instructional program, grade, sex, school and their interactions.

The 270 students in the program were grouped into three learning categories and assigned to three instructional levels receiving increasing amounts of supportive services. An analysis of variance was performed on the data. The trends and significant results indicated that a diagnostic, prescriptive approach to reading and appropriate use of supportive services was most effective. The students performed better in arithmetic than in reading. The significant arithmetic gains were attributed to the sequentially designed, individualized program that was implemented. Significant gains were found in motor skills, and it was recommended that a pre-school motor development program be implemented to increase the disadvantaged students' readiness for academic learning.

29. James, Jerusha Ann Cobb. A Study Of the Effects Of Problem-Solving Strategies Developed In Teacher In-Service Workshops On Fourth and Fifth Grade Childrens' Achievement. (Previously copyrighted material on several pages not microfilmed at request of author. Available for consultation at Wayne State University Library). Wayne State University, 1972. 213p. Adviser: Dr. Charlotte W. Junge. 73-12,540.

This study was concerned with devising a series of in-service workshops for teachers of the selected sample with reference to improving teaching strategies in problem-solving in mathematics. It was limited to the verbal problem-solving portion of the mathematics curriculum. It was further limited to ten classrooms comprising fourth and fifth-grade children in one school. A major purpose was to gain insight and information from the multi-model instructional mode employed in teaching the sample verbal problem-solving in mathematics. Specifically, answers to the following questions were sought: 1. Does specifically planned in-service work with teachers geared to problem solving techniques, the use of manipulative materials, and illustrations help children improve in their ability to solve verbal problems in mathematics? 2. Does the suggested procedure of using criterion-type diagnostic tests provide information and

direction needed for further instruction and facilitate preparation of learning experiences necessary for achievement?
3. Do teachers and students express confidence and enthusiasm as a result of exposure to the suggested model and procedures?

Educators have long been concerned about the difficulty some children have in solving verbal problems in mathematics. Numerous research studies have dealt with factors affecting problem-solving abilities and reveal that factors are varied and many.

It would be helpful to identify an approach that would facilitate achievement in problem-solving in mathematics for certain urban children. Consequently, the main concern in this study was whether or not the planned intervention for solving verbal problems in mathematics helped these children to improve in achievement of the problem-solving segment of mathematics. Based on standardized test results, disadvantaged urban children perform poorly in the verbal problem-solving segment of the mathematics tests.

In-service work with teachers may help these children gain better understanding of strategies to use for solving verbal problems by translating the language of mathematics into workable solutions.

The sample for the study was selected from an urban middle school that has many characteristics of large inner-city schools. The school population is predominantly Black from lower-socioeconomic backgrounds. The White portion of the school population is comprised of students of southern-born parents and a few from middle class families. One hundred and twenty-four students and ten teachers were involved in the study.

These students were identified through test data collected by the school system and grouped according to grade level attained in reading. Forms were designed and used to collect data on the participating teachers. Interview questions, criterion type diagnostic tests, and a handbook of teaching strategies were developed by the investigator for the purpose of gathering information to aid in analyzing the impact of the treatment. The procedure for conducting the study was as follows:

October	1. Secured permission for conducting the study.
November	2. Identified the location and subjects.
December	3. Began preparation of a handbook to be used for in-service workshops.
January	1. In-Service Workshop I. 2. Conducted first interview survey of children. 3. Collected and recorded California Test data.
February	1. In-Service Workshop II. 2. Administered Dutton's Attitudinal Checklist. 3. Administered Diagnostic Test I that follows teaching strategies developed in Workshop I.

March 1. In-Service Workshop III.
2. Administered Diagnostic Test II.
3. Tape recorded problem-solving interviews.

April 1. Administered Stanford Achievement Test on Arithmetic Applications to all subjects.
2. Collected final data on all participants.

May-June 1.Developed information profile for each subject.
2. Key punched data for computer analysis.

Evaluation of the study was based on information revealed from data collected on the subjects in the following areas: 1. Achievement of correct responses to verbal problems in the three diagnostic tests. 2. Responses to orally given problems in the interviews. 3. Responses to attitudinal checklists. 4. Comparison of the samples' achievement on a standardized test, (The Stanford Achievement Test), by the identified groups. 5. Assessment of the in-service workshops revealed by teachers on the evaluative questionnaire.

Recommendations were meant to suggest further study of processes of diagnosis, evaluation, and instruction meant to help educators facilitate achievement in solving verbal problems in mathematics for middle grade level children.

30. Kuefler, Melvin Mathias. An Evaluation Of the Effectiveness Of A High School Remedial Education Program. University of Oregon, 1972. 207p. Adviser: Dr. A. C. Hearn. 73-7920.

The purposes of this study were as follows: (1) to determine the effectiveness of a special remedial program, called a Saturday Morning Remedial Program (SMRP), which has been operating in a large urban center for a number of years; and (2) to obtain information about the SMRP program and the student who participates in it.

Comparisons between treatment groups and control groups were conducted to evaluate the effectiveness of the program, while interviews and questionnaires from SMRP staff and SMRP students provided the source of the desired information about the SMRP program and the SMRP students.

The sample for the experimental portion of the study consisted of 472 students who had participated in the SMRP classes in the years 1969 to 1971, and for whom data were available, and an equal number (472) of matched control students who had not participated in the SMRP program.

The sample for the information-seeking portion of the study consisted of questionnaire replies from thirteen teachers and from 172 students who had completed the program during the years 1970 to 1972.

In the statistical analysis 472 treatment students were matched with control students on the basis of sex, previous achievement, academic aptitude, age, and same home school classroom. Matching on the same home school classroom ensured that the students were also matched on regular class teachers, method of instruction, textbook, time of day the instruction was received, classmates, and classroom verbal interaction. The comparisons were made on final achievement in nine subjects. The criterion variables and their N's are as follows: Mathematics Nine (102 pairs), Mathematics Ten (93 pairs), Mathematics Twenty (68 pairs), Mathematics Thirty (102 pairs), French Thirty (10 pairs), Science Nine (11 pairs), and Chemistry Ten (8 pairs).

In addition, comparisons were made between experimental and control groups on final achievement for various subgroups as follows: sex; low, middle, or high previous achievement; low, middle, or high academic aptitude; and younger, middle, or older age.

Pearson product-moment correlations were calculated for the relationship between the variables. Analysis of variance was used to test the significance of the difference between means for the correlated groups in the comparisons established in the null hypotheses.

Findings and Conclusions

1. All the matching variables were significantly correlated with the criterion variable. Previous achievement and final achievement had a correlation coefficient of .55.

2. In five out of nine subjects remedial students obtained significantly higher final achievement scores than did control students. Therefore, the program may be considered effective for remedial students in the following subjects: Mathematics Ten, Mathematics Twenty, Mathematics Thirty, Chemistry Thirty, and Physics Thirty.

3. Although remedial students in Mathematics Nine, Science Nine, and Chemistry Ten did not achieve significantly higher final achievement scores than did control students, the difference in mean final achievement scores in each comparison was to the benefit of the remedial student.

4. French Thirty remedial students apparently did no worse or better than control students.

5. Female experimental students appeared to benefit more from the SMRP classes than did the male experimental students.

6. High previous achievement remedial students seemed to benefit more from the SMRP classes than did remedial students in the middle or low previous achievement subgroups.

7. High academic aptitude remedial students seemed to benefit considerably more from SMRP classes than did the low or middle academic aptitude experimental subgroups.

8. The middle age subgroup of experimental students also seemed to benefit considerably more from the SMRP classes than did the younger or older age experimental subgroups.

9. The remedial student in the SMRP program seemed to be highly goal oriented and appeared to have advantages that many high school students might not have; consequently he might be atypical.

Recommendations

1. That the SMRP program be continued, and 2. That the school board encourage more disadvantaged, underachieving students to participate in the SMRP program.

31. Newstat, Steven. A Study Of the Relationships Between Sociocultural Variables and Geometric Problem Solving Performances Of Disadvantaged Children. Michigan State University, 1972. 228p. 73-12,788.

The purpose of this research study was to determine if sociocultural variables of socioeconomic status, "father" present in the home, and crowding in the home influenced the learning of geometric constructions by culturally impoverished junior high school students.

A geometry workbook was designed to minimize the influence of reading by presenting each geometry lesson via an audio tape. Each taped lesson was approximately fifteen minutes in length and contained all of the necessary information for learning specific types of geometric construction illustrated in the workbook.

In this study a review of the literature pertaining to the cognitive theories of psychology was presented. These theories were based upon Piaget, Bruner and Ausubel. In general, the cognitive theorists attempted to explain the developmental learning patterns of the organism. These learning patterns were descriptions of the organism's capability for operational thinking.

Pedagogical implications for learning mathematical concepts are prevalent throughout the cognitive theories discussed in this investigation. Although the purpose of this investigation was not to study individual differences, some generalizations as to differential modes of intellectual growth for applying these modes to solving mathematical problems has been discussed. Recognition of the capabilities suggested by the various phases of intellectual growth are essential for the development of an adequate teaching methodology for the culturally impoverished learner.

The data analyzed in this research study included achievement test scores, course grades assigned by teachers, certain cultural variables, and scores on the test instrument of the teaching method being evaluated by this study.

In this study the predicted non-correlation between social and familial variables and student achievement were found. The non-significance of these correlations were determined by a two-tailed t test for correlated means and the t ratio for testing the significance of a correlation coefficient.

The results of this study indicated that familial characteristics, the presence or absence of a "father" in the home, and crowding produced no systematic effect upon the performance of students on the teaching method in question.

It would appear, from this study, that sociocultural variables are not correlated with students performance on the test instrument; and vocabulary deficiencies are not a barrier to successful learning when the disadvantaged child is presented with a teaching methodology that does not emphasize reading skills.

Further research should be focused on environmental variables and their relationships to physical characteristics, personality development, achievement data, and any changes in the socioeconomic status between infancy and adulthood. This chain like cause and effect relationship, between the disadvantaged child and his environment, should provide further understanding toward the development of a curriculum that would overcome the multilateral influence of social deprivations on learning.

32. Nowell, Willis Cullen. The Effectiveness Of the Learning Resource Teacher As A Treatment Component Of Elementary and Secondary Education Act, Title I, Programs For Culturally Disadvantaged Children. The University of Tennessee, 1969. 167p. Major Professor: A. Paul Wishart. 70-2129.

The general purpose of this investigation was to determine the effectiveness of an ESEA Title I treatment program designed for culturally disadvantaged children. Specifically, the purpose of this study was to determine the effects of a learning resource teacher on academic achievement scores for nine population subgroups on four independent variables: reading, work knowledge, arithmetic computation, and arithmetic problem solving.

A random sample of 339 subjects was selected from 34 elementary schools serving poverty areas of Metropolitan Nashville-Davidson County. The sample group was divided on the bases of sex and race. Eight population subsets were formed in addition to the total sample. Pre- and post- achievement measures were obtained for the first year when subjects were not exposed to treatment. Pre- and post- achievement measures were obtained the second year when subjects were subjected to treatment. All achievement measures were obtained by the administration of Forms A, B, and C of the Metropolitan Achievement Test administered by school psychologists and guidance counselors. Intelligence levels were determined by the use of the Otis Intelligence Test in the spring of the first year of the study. Analysis of variance and analysis of covariance were employed to determine the significance of differences between treatment and control groups at the 0.05 level of confidence. Intelligence was treated as the covariate. The data for each of the MAT areas were analyzed for the entire group and for eight population subgroups. For each of the MAT measures, the total sample was analyzed using a 2 x 2 x 2 (race x sex x treatment) factorial analysis of variance. Each of the population subsets was subjected to the appropriate race x treatment, sex x treatment, or treatment only analysis of variance. This series of analysis was then repeated with I.Q. scores being used as the covariate in a series of analysis of covariance.

Results of the study were presented in 111 tables. Tables depicting analysis of variance, analysis of covariance, and means and standard deviations were prepared for the nine population subgroups for the four academic achievement variables; reading, work knowledge, arithmetic computation, and arithmetic problem solving. For reading and work knowledge, differences were found between treatment and control groups. In all cases where differences existed, they could be accounted for by mean gain scores of White subjects. For arithmetic computation and arithmetic problem solving, those differences between treatment and control groups significant at the 0.05 level were attributed to Negro subjects.

From these data, it appears that the treatment program was successful as designed. All subjects demonstrated gain scores for the treatment period; although in some isolated cases, gain scores for treatment groups were less than for control groups. The learning resource teacher apparently affected an increase in academic achievement of culturally disadvantaged children. Differences in the rate of achievement for Negro and White subjects on the four variables could not be accounted for on the basis of these data.

There was the fact that many Negro subjects were experiencing integrated programs for the first time and were facing White middle-class teachers who may or may not have been successful in communicating with Negro subjects. The reverse was also true with White subjects facing Negro teachers for the first time in their school experiences.

Learning resource teachers were added to traditionally organized programs, and the effects of a conservative faculty group could not be determined from this investigation. With certain modification, this treatment program would warrant replication.

33. Owens, Douglas Timothy. The Effects Of Selected Experiences On the Ability of Disadvantaged Kindergarten and First Grade Children To Use Properties Of Equivalence and Order Relations. University of Georgia, 1972. 254p. Supervisor: Leslie P. Steffe. 73-5754.

This study was viewed as basic research in the application of Piagetian cognitive development theory to curriculum used in the primary school classroom. Small-group activities were provided to improve the abilities of the children to use mental processes which Piaget has concluded are prerequisite to the development of a concept of number.

Subjects of the study were 47 kindergarten and grade one children from an economically-disadvantaged urban community in the southeastern United States. Subjects were given 16 lessons in which the matching relations, "as many as," "more than," and "fewer than," and the length relations, "as long as," "longer than," and "shorter then," were operationally defined on concrete materials. Approximately one-half of the children took pretests. Then the full treatment group had four lessons on conservation of the matching relations and five lessons on the transitive property of the matching relations. The partial treatment (control) group continued with regular class work. Twelve structured interview posttests were given to all subjects on Matching (Length) Relations, Conservation of Matching (Length) Relations, Transitivity of Matching (Length) Relations, Symmetric Property of a Matching (Length) Relation, Asymmetric Property of Matching (Length)Relations, and Reversibility ($a > b$ implies $b < a$) of Matching (Length) Relations. An unstructured Transitivity (of a matching relation) Problem was also given.

The full treatment group outperformed the partial treatment group on the Asymmetric and Transitive Properties of Matching Relations but no relationship was found between being in a treatment group and performance on the Transitivity Problem. Grade one children outperformed kindergarten children on Matching Relations, Conservation of Matching Relations, Symmetric Property of a Matching Relation, Asymmetric Property of Matching Relations, Reversibility of Matching Relations, and Length Relations.

It was concluded that the treatment was not effective in improving the ability of the children to conserve matching relations. The treatment improved the ability of the children to perform transitivity tasks very much like the treatment activities, but this improvement did not generalize to the more difficult Transitivity Problem or to the logically parallel Transitivity of Length Relations.

Pretest was used as a factor because only part of the children had the pretests. While Pretest interacted with Treatment for two relational properties, pretesting did not interact with the treatment for any property on which instruction was given. It was concluded that pretesting had essentially no effect on the abilities of the children to use the relational properties.

Of the 66 correlations among the 12 variables, 46 were significantly different from zero, and all were positive. The median significant correlation was .47. Twelve of the non-significant correlations were with the variables Length Relations or Transitivity of Length Relations. It was concluded that there was a positive, but not strong relationship among the variables with the exception that Length Relations and Transitivity of Length Relations were not related to each of the others.

Performance on relations and conservation was slightly higher in the length relational category than in the matching relational category. Otherwise, overall performance was at about the same level on a length relational test as on the corresponding matching relational test. A test for independence indicated a relationship between attaining a criterion on conservation of length relations and conservation of matching relations, but no corresponding relationship was found for transitivity. No relationship was found between meeting the criterion on conservation and attaining the criterion on transitivity within either relational category. Apparently, the subjects in this sample were at a transitional stage on these tasks.

34. Shumaker, James E. A Comparison Of Study Habits, Study Attitudes, and Academic Achievement In Mathematics In Junior High School Of Students Taught By Individually Prescribed Instruction and Students Taught By Traditional Methods Of Instruction In Elementary School. University of Pittsburgh, 1972. 80p. 73-13,176.

The goal of this study was to determine if students with an elementary school background in an IPI curriculum compare favorably with students that have a non-IPI background in the elementary schools. It was designed to compare (1) academic achievement in mathematics, (2) study habits, and (3) study attitudes of students who enroll in a junior high school that has traditional methods of instruction from an IPI curriculum and from a non-IPI curriculum in elementary school.

The sample consisted of fifty-seven matched pairs of seventh grade students from the Baldwin-Whitehall School District. The two variables that were used to match students were measures of socio-economic status and general academic achievement in sixth grade. Socio-economic status was determined by using the hierarchy of occupations developed by August B. Hollingshead and Frederick C. Redlich. The measure of general academic achievement was the total grade score of all sub-tests from the Stanford Achievement Test taken in Grade 6.

Seventh grade students who were taught mathematics with IPI methods of instruction in elementary school were paired with students who received mathematics instruction with non-IPI methods. Students from the control group (or non-IPI) were given their elementary school training at one of four elementary schools. The experimental group (or IPI) attended McAnnulty Elementary School.

Criterion instruments were the 1964 edition of the Advanced Battery (Stanford Achievement Test) and the Survey of Study Habits and Attitudes (Form H) developed by Wayne H. Holtzman and William F. Brown. A total of five criterion scores were selected from three instruments--computation, concepts, and applications from the Stanford Achievement Test and study habits and study attitudes from the Survey of Study Habits and Attitudes.

The analysis of variance was used to test the significance of the difference between mean scores for the two groups in each of the five tests. Correlations among the criterion measures within the IPI group were calculated separately from the correlations within the control group.

The data suggests that IPI students and non-IPI students are not significantly different, at the 5 per cent level, on cognitive skills in mathematics (computation, concepts, and applications). The mean scores of fifty-seven students in each group resulted in a small difference with each of these measures.

Study habits and study attitudes are likewise not significant at the 5 per cent level between IPI and non-IPI students. However, the difference in mean scores was larger with these measures. In the case of study attitudes, the null hypothesis would be rejected at the 8 per cent level, with the difference in favor of the IPI group.

If this study is viewed as an aspect of the formative evaluation of this developing program, at least one suggestion for program modification can be identified. The marked differences in the study attitudes and study habits tests in favor of the IPI students suggests that further attention to the IPI program features that should contribute to these two qualities might lead to significant differences in favor of such a revised version of the program.

35. Silbaugh, Charlotte Vance. A Study Of the Effectiveness Of A Multiple-Activities Laboratory In the Teaching Of Seventh Grade Mathematics To Inner-City Students. The George Washington University, 1972. 69p. 72-19,733.

Purpose of the Study

The purpose of this study was to test the effectiveness of a multiple-activities laboratory in the teaching of mathematics by determining if seventh-grade students attending such a laboratory twice a week during a school year showed greater growth in mathematics achievement (1) than students in the same schools who did not attend the laboratory, and (2) than students from schools having no mathematics laboratory.

Methods and Procedures

The sample chosen from this research consisted of 980 students in 36 seventh-grade mathematics classes from six District of Columbia inner-city junior high schools. Twelve classes (338 students) attended multiple-activities laboratories; twelve classes (294 students) were housed in the same schools but did not attend the laboratories; twelve classes (348 students) were in schools with no laboratories.

All students were tested in October, 1970 and again in May, 1971, with the Comprehensive Test of Basic Skills, Form Q, published by the California Test Bureau, to determine their achievement in mathematics. The data, when analyzed by using analysis of covariance, showed statistically significant differences at the .01 level between the criterion scores for the three groups, even after adjustment was made for the linear effect of the covariates.

Recommendations

1. Each District of Columbia Junior High School should have at least one mathematics laboratory in operation.

2. When a mathematics laboratory is operational in every District of Columbia Junior High School, further research should be undertaken to test the effectiveness of such laboratories, and this research should incorporate the same schools used in this experiment.

3. Further research should be undertaken to test the effectiveness of different types of laboratory programs in mathematics.

4. An instrument should be devised to test motivation in the study of mathematics.

36. Woods, Francis Pollard. A Study Of Mathematics Education In the Public Secondary Schools of Louisiana. The Louisiana State University and Agricultural and Mechanical College, 1972. 109p. Supervisor: Professor G. C. Gibson. 73-13,693.

The purpose of this study was to analyze the characteristics of mathematics education in the public secondary schools in Louisiana in relation to teachers, programs, and methods of teaching. The data were obtained from the 1971-72 Annual School Reports to the State Department of Education and from a questionnaire sent to 1759 secondary mathematics teachers. There were 1517, or 86.3 percent, usable questionnaires returned.

Of the questionnaire population 52.7 percent of the teachers were male as compared to 47.3 percent female. Fifty-six percent of the teachers were younger than 35 years of age. Female teachers were in the majority in the under 25 and over 55 age brackets. The ratio of Caucasian teachers to Negro teachers was 1070 to 447. Forty percent of the mathematics teachers had less than six years of teaching experience. Forty-three percent were new in their present school. Temporary teaching certificates were held by 8.5 percent of the mathematics teachers. Bachelor's degrees had been earned by 98.7 percent of the teachers. Of these teachers, 33.4 percent had also earned master's degrees. Approximately 70 percent of these degrees were earned in the public colleges and universities of Louisiana. Fifty-eight percent of the teachers were classified as mathematics majors, 16 percent as mathematics minors, and 11 percent as unqualified. There were 42.9 percent of the teachers who had not taken a single graduate course in mathematics. This compared to 14.7 percent who had taken nine or more courses. Membership in the National Council of Teachers of Mathematics was held by 319 teachers. The two state professional mathematics organizations showed a combined membership of 329.

Information on teaching assignments revealed that 54.1 percent of the teachers taught five classes of mathematics.

A list of the basic textbooks and percent of students using them was obtained. The most frequent method of selecting these textbooks was by administrative unit committee recomendation; however, 35.5 percent of the teachers had no knowledge of who selected textbooks.

Seventy-seven percent of the mathematics teachers reported that their schools had mathematics departments with department chairmen. Only 6.5 percent indicated that they utilized team teaching. About one-half of the teachers stated that homogenous grouping of students was used in mathematics courses.

Three-fourths of the teachers reported that they used the "tell, show, supervised study" method of teaching and use extra drill materials. Some 56.5 percent stated that they individualized their instruction. Programmed materials and audio-visual media, with the exception of the overhead projector, were used frequently.

School Mathematics Study Group material had been taught by 19.8 percent of the teachers. Only ten teachers were experimenting with instruction in computer science, while the use of television in instruction was zero.

The findings of this study indicate the following conclusions:

1. Mathematics was being taught by mathematics teachers who were equally balanced by sex, with a race ratio of seven to three of Caucasian to Negro.
2. The rate of turnover of mathematics teachers appeared high since 40 percent of the teachers had less than six years teaching experience.
3. There existed a shortage of mathematics teachers in certain areas of the State as judged by the number of temporary certificates issued.
4. Eighty-seven percent of the students were taught by mathematics majors and minors.
5. A greater number of mathematics teachers elected science as a teaching minor than any other subject field.
6. There was little participation in professional mathematics organizations by the mathematics teachers.
7. The "tell, show, supervised study" method of teaching prevailed.
8. Very little use was being made of audio-visual media with the exception of the overhead projector.
9. The degree of use of the computer or television in instruction was negligible.

37. Lovins, Richard. The Influence Of Differential Testing Environments On Achievement In Culturally Deprived Negro Youth. The University of Connecticut, 1973. 107p. 73-9840.

Sixty-two sixth-grade black male and female children, culturally deprived and nondeprived, high and low mental ability, were given an arithmetic achievement test in a controlled and structured environment of two types: (1) A perfunctory administration, which was designed to give an instructional set which was accurate, but minimal and concise. (2) An affective administration, which was an instructional set of kindness and empathy.

Generalized reward expectancies were indicated to the children, plus the use of verbal reinforcements throughout the test. The verbiage was designed to assuage any existing anxiety by truthfully explaining that their grades would in no way be affected.

Each administrative set (perfunctory and affective) was administered by three black and three white adult male examiners. This procedure was established to determine the effects of the type of administration and the race and sex of the examiner on the subjects as observed on the criterion measures.

All variables were entered into three-way analysis of variance. Four analyses of variance were set up, each having a 2 x 2 x 2 design.

Under all treatment variables, nondeprived subjects (male and female) achieved significantly better than deprived subjects. Under all treatment variables, subjects of higher intelligence (male and female) achieved significantly better than those of lower intelligence. All other main effect and interacting variables failed to achieve significant relationships with the criterion measure.

The literature review pertinent to the variables in this study is extensive. Broad conclusions are drawn and implications are made. Suggestions for expanded research are included.

Science

38. Bunsen, Dale Maurice. A Comparison Of Methods Of Science In-Service Education For Elementary Teachers Utilizing the American Association For the Advancement Of Science (AAAS) "Science-A Process Approach" Materials. The University of Nebraska Teachers College, 1968. 100p. Adviser: James A. Rutledge. 68-18,042.

During the 1965-66 science in-service programs were conducted for Nebraska elementary teachers. Science consultants from the five state colleges, Omaha University and the Nebraska State Department of Education worked with "Lead" elementary teachers in the usage of "Science--A Process Approach" materials for the first semester of the 1965-66 school year. Following this preparation the "Lead" teachers conducted science in-service programs for other Nebraska elementary teachers. These teachers were labeled "In-Service" teachers. College elementary science methods classes also served as the preparatory vehicle in this approach for additional teachers who were later labeled "Methods" teachers.

During 1966-67 a number of elementary teachers began using the "Science--A Process Approach" materials as a result of this preparation. Teachers unprepared in this science program were also using it as a result of their school adopting this program. They could not or did not participate in the in-service program, or were new to their system. These teachers were labeled "Unexposed" teachers.

The purpose of the study was to compare the four categories of teacher preparation, (1) Lead, (2) In-Service, (3) Methods, and (4) Unexposed, by determining if any differences exist in teacher competencies as measured by the performance of their students on three of the AAAS process measures. The three process measures used were Classification, Space/Time Relations, and Communication.

A total of 128 students (32 in each teacher preparation category) taught by 16 teachers from grade level one, two, three and five were used to test the null hypothesis that no significant difference existed in elementary science teacher competencies within the four teacher preparation categories as determined by student performance on the three AAAS process measures. The investigator tested each student individually.

Analyses of variance-covariance on the student post-test score means, with student pre-test score means and IQ scores as the covariants, showed no significant difference within the four teacher categories for the process of Classification and Space/Time Relations. However, a significant difference did occur within these categories for the process of Communication.

The Newman-Keuls A Posteriori test for differences between each of the four teacher categories was completed on the student scores for the process of Communication.

The results indicated the following:

1. The score means of the students taught by the Unexposed teachers were significantly lower than the other three teacher categories.

2. There was no significant difference between the score means of the students taught by the In-Service teachers and those taught by the Methods teachers.

3. The score means of the students taught by the Lead Teachers were significantly higher than the other three teacher categories.

The investigator concluded:

1. Teacher preparation regarding the AAAS materials is favorably associated with higher student score means in the process of Communication.

2. Teaching a number of activities in the process of Communication, either to one's colleagues or to one's students prior to using these materials in the classroom, is favorably associated with higher student score means.

3. A concentrated block of time for teacher preparation, with the aid of a competent science consultant, is favorably associated with higher student score means in the process of Communication.

4. The process of Communication focuses on developing student competencies in graphing and graph interpretation. Student achievement of these competencies is more highly dependent upon prior teacher preparation than is student achievement of competencies within the processes of Classification and Space/Time Relations.

39. Kral, William Kevin. Effects Of A Supplemental Science Program On Achievement Of Students With Different Socio-Economic and Ethnic Backgrounds. Oklahoma State University, 1972. 41p. Adviser: Professor Kenneth Wiggins. 73-15,169.

This study sought to investigate the effects of the addition of a supplemental science program to existing curricula in selected elementary schools. The effects of the supplementary science program were measured (in terms of science achievement) against the following variables: 1) effectiveness of the supplemental program on treatment group versus non-treatment (control) group; 2) effectiveness of supplemental program on Indian versus non-Indian groups; 3) effectiveness of supplemental program on high socio-economic group versus low socio-economic group; 4) effectiveness of supplemental program on population with favorable versus unfavorable science attitude.

The Stanford Achievement Test was used to measure the effectiveness of the supplemental program. The Elementary Science Study (units: Attribute Games and Problems, Mirror Cards, Structures, Pattern Blocks) was used as the supplemental science program. The Home Index Scale was used to measure socio-economic level and The Reed Science Activities Inventory was administered to measure science attitude. Four elementary schools in Central Oklahoma were employed in the study. Two schools provided three sixth grade classrooms and two schools provided one sixth grade classroom, for a total of eight classrooms. The total population was 189.

From the pool of eight classrooms, four were randomly assigned the supplemental science program and the remaining four constituted a control group. The ESS was introduced to the treatment group and a placebo treatment consisting of films, current events, and discussions was given to the control group for one hour a week, during twelve weeks, from September through December, 1970. At the end of the study, both experimental and control groups were given The Stanford Achievement Test, The Home Index Scale and The

Reed Science Activities Inventory. Analysis of the data was accomplished by using factorial 2 x 2 analysis of variance on each of the four variables.

It was found that the supplemental science program made a difference in science achievement. The experimental group was significantly better than the control group. Non-Indian students scored higher in science achievement. Those students with a high socio-economic background did better than those students with a low socio-economic background. The effect of science attitude on achievement was non-significant.

It appears that this research has significance in terms of potential quality of elementary school science curricula whereby needed change and innovation could be introduced into a curriculum in an orderly and nondisruptive manner. The data would have meaning in terms of curriculum planning, teacher education programs and budgeting.

Vocational Education

40. Despain, Charles Ward Jr. Analysis Of Male Navaho Students' Perception Of Occupational Opportunities and Their Attitudes Toward Development of Skills and Traits Necessary For Occupational Competence. Washington State University, 1965. 113p. Chairman: Gordon E. McCloskey. 66-774.

The purpose of this study is to analyze male Navaho students' perception of occupational opportunities and their attitudes toward development of skills and traits necessary for successful employment in off-reservation occupations.

Three instruments were administered to 79 Navaho male students of the Intermountain School at Brigham City, Utah to gain the necessary data for this study. A scale was used to measure the students' general levels of occupational aspiration and their aspirations in terms of four possible combinations of realistic and idealistic expression-levels and short- and long-range goal-periods. A Behavior Preference Scale was used to determine students' attitudes toward development of six personal traits: cooperation, friendliness, integrity, leadership, responsibility, and rational (critical) thinking. These traits are related to successful work in modern off-reservation occupations. A third scale was used to measure students' attitudes toward four basic school subjects: English, reading, writing, and arithmetic.

Data obtained by this study indicates that:

1. The general occupational aspiration score for the total group falls in the medium prestige range. A small percentage (3 per cent) of the respondents of this study aspire to occupations in the high prestige range, while 78 per cent and 18 per cent fall in the medium and low ranges, respectively.

2. At their initial career-point (when they leave school), the subjects would choose occupations of about equal prestige at both the idealistic and realistic expression-levels.

3. At their mature career-point (when 30 years of age), the students would choose occupations of higher prestige at the idealistic expression-level than they would at the realistic expression level.

4. In general, subjects appear to perceive possibilities of further preparation after their initial career-point to qualify for higher prestige occupations by the time they reach their mature career-point.

5. The general level of occupational aspiration of the students, as a group in the Academic Program, is above that of those in the Terminal Vocational Program. However, the general occupational aspirations of both groups fall within the medium prestige range.

6. The students as a total group rank low in traits of cooperation, integrity, and responsibility; average in friendliness and leadership; and high in critical thinking.

7. As a group the Academic students rate no lower than average on any of the above traits while the Terminal Vocational group ranks low in all traits but leadership and critical thinking.

8. The total population has a favorable attitude toward each of the four school subjects. However, the Academic group indicates a more favorable attitude toward each subject than does the Terminal Vocational group.

9. Subjects of this study may find it difficult to succeed in modern occupations in off-reservation areas because of their apparent lack in development of essential personal traits.

10. Students as a group in the Academic Program appear to have developed traits and skills necessary for successful employment beyond that of the group in the Terminal Vocational Program.

41. Humbert, Jack Terrill. The Work Values Of Male and Female Urban and Rural High School and Technical Institute Welfare Students In New Mexico. The University of New Mexico, 1966. 477p. 66-11,713.

The purposes of this study were: (1) to discover and compare work values peculiar to male and female urban and rural high school and technical institute welfare students; (2) to discover and compare the present information which male and female and rural high school and technical institute welfare students hold about marketing and distribution; (3) to discover and compare the work values of students from welfare families in New Mexico with work values of students from other geographical locations; and (4) to discover occupational choices and vocational influences peculiar to male and female urban and rural high school and technical institute welfare students.

In the study, work values were determined and compared; information about marketing and distribution was determined and compared; work values were determined and compared with work values of students from other geographical locations; and occupational and vocational influences were determined. Work values and information about marketing and distribution were determined and compared to find any significant differences between males and females, rural or urban students, and high school or technical institute welfare students. The population for the study consisted of 104 male and female welfare students from families on the New Mexico welfare rolls for five years or longer. The individual measures used to obtain the work measures were Donald E. Super's Work Values Inventory, Robert Guion's National Survey on Work, and Jack T. Humbert's Work Inventory.

The conclusions were as follows:

1. New Mexico urban welfare students as compared to New Mexico rural welfare students attach more importance to work which is difficult and complex; work in which something is accomplished; work in which there are compatible workers; and work that takes the interest of others as a primary concern.

2. New Mexico rural welfare students as compared to New Mexico urban welfare students attach more importance to work that is unrestricted and free.

3. New Mexico high school welfare students as compared to New Mexico technical institute welfare students have more information about the marketing functions of merchandising, buying, and selling.

4. New Mexico technical institute welfare students as compared to New Mexico high school welfare students attach more importance to a work situation that is clean and inside and to a work task that can be brought to a successful end.

5. New Mexico welfare females as compared to New Mexico welfare males attach more importance to work that has power, authority, rights and obligations; work that takes the interest of others as a primary concern; work in which the employee has a supervisor with whom he is compatible; and work that is clean and inside.

6. New Mexico welfare males as compared to New Mexico welfare females attach more importance to work that allows inventive ingenuity; work that organizes and directs the activities of others; work that is exempt from external control or support; and work which allows the belief in private ownership of property and the freedom of the individual to engage in economic activities of his choice.

7. New Mexico welfare students as compared to Hana's Plainfield, New Jersey students attach more importance to work that has power, authority, rights and obligations.

8. Hana's Plainfield, New Jersey students as compared to New Mexico welfare students attach more importance to work that is unrestricted and free.

9. Hana's Plainfield, New Jersey students as compared to New Mexico welfare students are similar in their aggregate rating of Super's 15 work values.

10. New Mexico welfare students as compared to R. Alsup's Albuquerque, New Mexico students are similar in their rating of Super's fifteen work values.

11. New Mexico welfare students want to expect to have occupations that are ranked according to importance as follows: (1) professional, technical or managerial occupations, (2) clerical or sales occupations, (3) service occupations.

12. New Mexico welfare students were influenced in their occupational choices, as ranked according to importance, by the following reasons: (1) "The amount of money I would receive," (2) "My belief in my ability to do this job well," (3) "My belief that I can serve people best in these vocations."

13. New Mexico male, rural, and high school welfare groups ranked the skilled occupations (seamstress, machinist) as the most important occupation, the professional occupations (teacher, dentist) as second in importance, and the sales occupations (salesperson, salesman) as third in importance.

14. New Mexico female, urban, and technical institute welfare groups ranked the professional occupations (teacher, dentist) as the most important occupations, the skilled occupations (seamstress, machinist) as second in importance, and the sales occupations (salesperson, salesman) as third in importance.

15. The findings in this study also have implications for New Mexico Welfare Agencies, New Mexico State Employment Offices and private business in the State of New Mexico.

42. Blume, Paul Rountree. An Evaluation Of Institutional Vocational Training Received By American Indians Through the Muskogee, Oklahoma Area Office Of the Bureau Of Indian Affairs. Oklahoma State University, 1968. 264p. Adviser Larkin Warner. 69-14,215.

The United States enjoys the highest standard of living of any nation in the world. At the same time, however, the nation is confronted by serious employment and poverty among selected groups of its population. One such group is composed of non-white Americans. The nonwhites who suffer relatively most from unemployment and poverty are the American Indians.

The Indian economic problem has been recognized and policies have been implemented to alleviate it. One such policy is Public Law 959 which provides Indians with institutional and on-the-job training. The purpose of this dissertation is to evaluate the institutional training received by Indians through the Muskogee, Oklahoma Area Office of the Bureau of Indian Affairs during the period from 1958 through December 31, 1966. The evaluation is conducted in light of the cultural and historical background of the trainees.

The methodology utilized in the evaluation includes a pre- and post-training comparison of employment rates, average monthly earned incomes, and labor force attachment rates. Each of these variables is adjusted for changes caused by factors other than the receipt of training. In addition, a benefit-cost analysis is used to evaluate the program in a broader economic context.

Findings: Trainees who complete training benefit in terms of higher employment rates and incomes. The average increase in employment rates is three and one-half months additional employment per year. The average annual increase in income (assuming 100 per cent employment) is $1,929. The social benefits of the program far outweigh the social costs.

On the basis of the above findings, it appears desirable that the allocation of training funds to the Muskogee Area Office can be increased so as to train more Indians for productive lives in their communities.

43. Shill, James Franklin. Educational and Occupational Aspirations, Expectations and Abilities Of Rural Male High School Seniors In Mississippi. Louisiana State University and Agricultural and Mechanical College, 1968. 385p. Supervisor: Dr. C. L. Mondart, Sr. 68-10,761.

The central purpose of this research was to provide vocational educators with insights into the educational and occupational aspirations, expectations, and perceived abilities of rural male high school seniors in Mississippi.

The major problem was concerned with determining and analyzing the differences in educational and occupational aspiration, expectations and abilities between seniors with vocational agriculture training and those without such training. Also, comparisons were made between the educational and occupational aspirations, expectations and abilities of seniors from high schools with less than 200 students, to those from larger high schools.

Data were obtained from 33 randomly selected high schools in Mississippi. Pre-tested questionnaires were mailed to vocational agriculture teachers who administered them to 517 respondents. Information was transferred to I.B.M. cards for electronic computation. Statistical procedures involved computations of frequencies, percentage distributions, and chi square tests for significance.

Respondents' personal and parental characteristics included much of the socio-economic spectrum of their communities.

Parents of seniors who had not participated in vocational agriculture training in both sizes of schools tended to place more emphasis upon formal education than did parents of seniors who had participated in such training.

Seniors in both sizes of schools without vocational agriculture training tended to make higher grades, rank higher in their classes, and set their educational objectives later than those with such training.

Respondents who had participated in vocational agriculture training in both sizes of schools tended to perceive their vocational abilities as being higher and their academic abilities as being lower than those who had not participated in such training. Seniors in large schools tended to perceive their writing, speaking, mathematical, business, and agricultural abilities as being better, and their reading, scientific, and trade and industrial abilities as being poorer than those in small schools.

In both sizes of schools respondents without vocational agriculture training tended to have higher educational aspirations and expectations than those with such training. However, seniors with vocational agriculture training tended to have educational aspirations that were more closely aligned to their expectations than those without such training. Seniors in large schools tended to have higher educational aspirations and lower expectations than those in small schools.

Seniors who participated in vocational agriculture training in small schools tended to aspire to employment in construction, government, or agriculture and tended to expect employment in construction, service and miscellaneous, or manufacturing, whereas those not participating in such training tended to aspire to employment in the service and miscellaneous industry, or in construction, and tended to expect employment in manufacturing, or in the service and miscellaneous industry.

Respondents with vocational agriculture training in large schools tended to aspire to employment in agriculture, construction, or government and tended to expect employment in construction, agriculture or manufacturing. Those without such training tended to aspire to and tended to expect employment in construction, government, or in the service and miscellaneous industry.

In both sizes of schools seniors with vocational agriculture training tended to aspire to professional, managerial, or skilled occupations and tended to expect skilled professional, or semi-skilled occupations. Those without such training tended to aspire to professional, managerial, or skilled occupations and tended to expect professional, semi-skilled, or unskilled occupations.

It was found that seniors in both sizes of schools who participated in vocational agriculture training tended to select agriculture-related occupations more often than those who had not participated in such training.

44. Wertheim, Judith Barr. The Vocational Development of Non-College Bound High School Students: Application Of A Self-Concept Theory. Rutgers University The State University of New Jersey, 1971. 101p. Chairman: Dr. William Bingham. 72-16,103.

The present study dealt with the translation of self concept into occupational self concept as a criterion for evaluating vocational-technical secondary education. Applying Super's self-concept theory of vocational development, the study concentrated on the translation process among seniors in a vocational-technical high school; compared these boys with those in vocational and general programs in a comprehensive high school; and compared seniors to freshmen who had selected, but not begun, these programs.

Level of incorporation, the degree of agreement between self-concepts and occupational self-concepts, was the primary concern of the present study. One major hypothesis was that seniors in each of the three non-college-bound curricula evidence a higher level of incorporation for self and entry job than do freshmen. Other major hypotheses were that vocational-technical school students evidence a higher level of incorporation for self and entry job (a) than for self and other self-referrent jobs; (b) than, based on a 5-point scale, do seniors in a vocational or a general program.

Subsidiary hypotheses were: (a) There is no difference among freshman groups for level of incorporation for self and entry job; (b) Vocational-technical school seniors evidence a higher level of incorporation for self and entry job than, based on a 3-point scale, do seniors in a vocational or a general program.

A shortened form of the Occupational Rep Test, a vocationally relevant adaptation of Kelly's Role Construct Repertory Test, was administered to 76 seniors and 48 freshmen. Subsequently, Ss rated each of 11 bipolar constructs as they applied to self and to at least three self-referrent jobs. Absolute differences were computed for ratings of self and each self-referrent job.

Data were analyzed by the Mann-Whitney U test, the Kruskal-Wallis one-way analysis of variance by ranks, and the Friedman two-way analysis of variance by ranks. The following results, to which the .05 significance level applies, were obtained:

1. There is no difference between freshmen and seniors for level of incorporation for self and entry job.
2. When a 5-point scale is used, vocational-technical school students evidence a higher level of incorporation for self and entry job than do seniors in the vocational or general programs.
3. When a 5-point scale is used, there is no difference between seniors in the vocational program and the general program for level of incorporation for self and entry job.
4. Vocational-technical school seniors do not evidence a higher level of incorporation for self and entry job than for self and other self-referrent jobs.
5. Vocational-technical school seniors evidence a lower level of incorporation for self and the job they have rejected than for self and other self-referrent jobs.
6. There is no difference among freshman groups for level of incorporation for self and entry job.
7. When a 3-point scale is used, there is no difference among senior groups for level of incorporation for self and entry job.

An explanation for the non-significant findings was the global nature of the 3-point scales. Significant findings, however, indicated that a new criterion might well be applied to vocational-technical education. Vocational-technical seniors have progressed further than other groups in translating self concept into occupational self concept, thus gaining flexibility in dealing with the vicissitudes of working life. Furthermore, findings within the senior vocational-technical group indicated that decision making involves articulating what is to be avoided prior to specifying what is to be approached. This view of decision making raised questions about the process, provided directions for future research, and suggested a new dimension to the counselor's role.

45. Bauer, Carl A. A Study Of the Effect That Participation In the Work Experience Has On the High School Student. University of Southern California, 1972. 115p. Chairman: Professor Carnes. 73-7242.

Listed in the California Handbook on Work Experience are a series of attributes or benefits which students are expected to gain from enrollment in work experience. They are as follows: (1) Learning to assume responsibility. (2) Gaining knowledge and attitudes necessary for successful job performance. (3) Acquiring good work habits. (4) Learning how to get along with fellow workers and employers. (5) Developing personality and poise. (6) Augmenting the financial resources of the students and assisting them to remain in school. (7) Developing an appreciation of the value of wages. (8) Developing an appreciation and understanding of the relationship between formal education and job success. (9) Exploring the fields in which they feel their vocational interests lie and determining whether or not these fields are suitable. (10) Broadening their understanding of the occupational world and of working conditions in the world of work. (11) Giving students who must work a feeling that their jobs have added importance.

The main problem of concern in this dissertation was to determine, through the use of two recognized instruments, The Vocational Development Inventory, Attitude Scale, developed by Crites, and the Work Value Inventory, developed by Super, whether or not the student objectives as stated in the Handbook are actually being achieved by enrollees in the program to a greater degree than comparable students not enrolled.

All 12th grade students enrolled in work experience for the first time were compared with selected 12th grade students who had applied for work experience, but for some reason had never actually completed their enrollment in the program.

The district chosen for the study is rather heavily industrialized and is adjacent to the Los Angeles City School District. The students were enrolled in two high schools of the district; however, one of the high schools had all the 12th graders from a new high school just beginning operation the year of the study. Ninety-seven students took a pretest in Octover 1971, using the instruments indicated. Eighty-two of these same students took the posttest in late January of 1972. Forty-four of these were in the experimental group that finished both tests while 38 were in the control group finishing both tests.

The Fisher "t" test was used to test the means for significant differences. On the pretest the experimental and control groups were equivalent for the VDI and all categories of the WVI tested except independence, where the experimental group scored significantly higher. In the posttest no significant differences were found between the two groups on the VDI or in any categories of the WVI. The conclusion for this main phase of the study must then be that Work Experience Education students did not acquire the benefits or attributes claimed for the program in the Handbook to a significantly greater degree, during the semester term that this study was conducted than did those in a control group. A secondary study of dependability and reliability based on school attendance records did not show a significant degree of difference between the experimental or control group.

Another secondary study comparing Vocational Work Experience students with all students in the experimental group showed that on the VDI there was no significant difference. On two categories of the WVI there were significant differences. The smaller group was higher in prestige qualities and lower than the entire group in management qualities.

Still another secondary study comparing students from the experimental group as a whole with a volunteer group who participated in a weekly group counseling session found no significant difference on the VDI or any categories of the WVI.

The results of this study parallel a statement written by Martin Hamburger in a 1967 paper produced for the U.S. Office of Education.

> Although it is claimed that meaningful work experience for students increases the holding power of the school, builds character, develops desirable habits and attitudes, and provides vocational orientation, research evidence on the efficiency of work experience as educational or therapeutic is lacking. If positive outcomes emerge from work experience, they are primarily financial or otherwise instrumental. This instrumentality however, is connected with independence, maturity and responsibility. Meeting role-models, key figures, and vocationally successful people may be just as important as any other experience, in developing or expanding work-study programs.
> ...It is the connection, the relationship, or the fact of life which gives the experience meaning, not the task which has inherent meaning.

46. Cole, Kenneth William. The Relationship Of Self-Concept and Level of Occupational Aspiration Of Advantaged and Disadvantaged Eighth Grade Boys. Arizona State University, 1972. 88p. Chairman: Gene Talbert. 72-30,361.

The objective of this study was to compare the relationships of self-concept to the occupational aspirations of advantaged and disadvantaged eighth grade boys. Investigations were made concerning differences in self-concept and level of occupational aspirations between advantaged and disadvantaged eighth grade boys. The criteria measurement instruments used for this investigation were the Tennessee Self Concept Scale, Counseling Form, 1970 Edition, and the Occupational Aspiration Scale (Haller, 1961).

A total of 70 boys were randomly selected for this study. Thirty-five eighth grade boys from Rio Vista School in the Roosevelt School District, Phoenix, Arizona, were selected as the disadvantaged group. Rio Vista provided a multi-racial selection of boys who could be classified as disadvantaged. Thirty-five advantaged eighth grade boys were selected from Royal Palm School. This school, located in the Washington School District, Phoenix, Arizona, serves students from homes having a yearly family income well above $10,000.

The data were gathered at the end of the Spring Semester, 1972. A one-way analysis of variance was used to test between the variables of the Tennessee Self Concept Scale and the Total Score of the Occupational Aspiration Scale for a significant difference in mean scores between advantaged and disadvantaged eighth grade boys.

Although there were differences in mean t scores on the

TSCS which seemed to favor advantaged boys in all cases, only in the case of the Moral-Ethical Self scores was this difference significant. On the test for significant differences between means of the OAS, it was clearly shown that, in this study, there were no differences in the occupational aspirations of the advantaged and disadvantaged boys.

A Pearson product-moment correlation coefficient was used to test for correlation between each of the TSCS variables and the Total Score of the OAS of advantaged and disadvantaged eighth grade boys. Within the sample of advantaged eighth grade boys, a significant positive correlation was shown to exist between the following:

1. Total P Score and OAS
2. Personal Self score and OAS
3. Family Self score and OAS

There was no significant correlation between Physical Self score and OAS or between Moral-Ethical score and OAS for advantaged boys.

Within the sample of disadvantaged eighth grade boys, there were no significant correlations between any of the scores on the TSCS and the Total Score of the Occupational Aspiration Scale.

Advantaged boys did not have a significantly lower or higher concept of themselves than did disadvantaged boys in these comparisons in the study. There was no definite relationship between disadvantaged eighth grade boys' total esteen, how they viewed themselves physically, their feelings of personal worth, moral worth, family worth or social ability and their level of occupational aspiration.

There are implications in this study that a comprehensive elementary career education program should be developed for both advantaged and disadvantaged students. Further implications of this study show a need for cross-cultural integration of students in American schools. The results indicate a need to bring the disadvantaged student out of his community and into the socially integrated school at an age prior to high school.

Further experimental study is recommended to determine what causal relationships may exist between the self-concept of adolescent boys and their level of occupational aspiration. Replication of this study in socially integrated schools is recommended to determine if self-concept is developmental or is due to broadening of the competitive base in advantaged or disadvantaged eighth grade boys.

47. Hunton, Stanley Raymond. An Investigation Of the Changes Occurring In Vocational Self Concepts In the Seventh Through Twelfth Grades. Southern Illinois University, 1972. 99p. Major Professor: Robert W. Graff. 72-22,483.

The purpose of this study was to provide evidence on the validity of the translation process of vocational development as theorized by Super (1963). Several studies have shown that self concepts were significantly related to preferred occupational preferences, but they generally used high school seniors or college students who should be nearing the end of the translation process. These studies also concerned themselves only with one point in time and did not attempt to demonstrate that vocational self concepts become more congruent as students progress through school. The term "vocational self concept" indicates the relationship that exists between self concepts and preferred occupational preferences.

As part of the translation process it is theorized that students not only learn more about themselves, but also about various occupations. It is hypothesized that the school plays a major role in providing information to the students that is relevant to the formation of their self concepts as well as about occupations.

This study attempted to determine whether changes occur in vocational self concepts; whether changes occur in the amount of occupational knowledge students believe they have; and whether school experiences are related to the formation of vocational self concepts.

The sample consisted of 437 students from the 7th through 12th grades of a Southern Illinois public school. About equal numbers of male and females, blacks and whites were included. The sample was below national averages in intelligence and achievement as well as socio-economic levels.

The instruments used were of two types. The first was a modified semantic differential with 22 work pairs. The concepts of: My real self; A person in a preferred occupation, and A person in a non-preferred occupation were rated on the 22 scales. In conjunction with the self rating, each student also rated how important each scale was in describing his self concept on a three point scale.

The second instrument was designed to measure students' perceptions of their knowledge of occupations. It consisted of 40 occupations taken from Roe's (1956) classifications of occupations. Students rated their knowledge of these occupations on eleven point Likert-type scales.

A self-report measure was used to collect data concerning the students' number of extracurricular activities, school awards, and average grades. These constituted the school/club experiences.

Mean absolute differences were calculated between subjects' self concepts and preferred occupational preferences (vocational self concept scores), and also their self concepts and nonpreferred occupational preferences. Those scales that were considered to be of the same value to the subjects were scored separately to produce four mean absolute difference scores-total, "no importance," "some importance," and "very important."

It was found that grade level mean vocational self concept scores differed from each other at the .0193 level of confidence. It was further demonstrated that these scores generally became smaller, more congruent, as the grade level increased. However, a disjunction occurred at the 8th grade level with their scores being as small as the 11th graders. (The results were based on scores which were determined through use of scales rated as being "very important.") It was also found that there was an increase in subjects' perceptions of their knowledge of occupations from grades 7 to 12. The grade level mean scores differed at the .0005 level of confidence. There was no evidence that school/club experiences were related to vocational self concepts. However, this was probably due to the lack of variability in the independent variables which was caused by inadequate measurement techniques.

48. Hurley, Robert Bernard. Race, Fatherlessness, and Vocational Development: An Exploration of Relationships Between Membership In Nuclear Or Fatherless Families and Level of Occupational Aspiration and Expectation, Self-Esteem, Extrinsic Work Values and Person-Orientation Among A Sample Of Black and White Adolescent Boys. (Previously copyrighted material not microfilmed at request of author. Available for consultation at New York University Libraries). 105p. Chairman: Professor Nathaniel J. Pallone. 73-8169.

This investigation was designed to study, among a sample of 182 black and white adolescent boys from the working class, the relationship between membership in a nuclear or a fatherless family and (a) level of occupational aspiration, (b) the disparity between level of occupational aspiration and occupational expectation, (c) level of self-esteem, (d) extrinsic work values, and (e) aspiration to and expectation of an occupation that is person or non-person oriented.

Theoretical foundations were found in the literature of vocational development and the literature relative to the psychological and sociological impact of family structure.

Subjects were enrolled in grades 10-12 in high schools in four distinct types of urban areas in New York State -- megalopolis (New York), exurbia (Patchogue), a large city in the midst of a Standard Metropolitan Statistical Area (Albany), and a relatively isolated city (Elmira).

Occupational aspiration and expectation levels were determined by applying subjects' responses to items on the New York University Study of Occupational Choice among High School Students to Hamburger's Revised Occupational Scale for Rating Socio-Economic Status. Four evaluative scales of the Semantic Differential were utilized to measure self-esteem, and extrinsic work values were operationally defined as scores on the appropriate scales of the Work Values Inventory. Aspired to and expected occupations were dichotomized as person or non-person oriented by utilizing the fifth digit Dictionary of Occupational Titles code assigned to those occupations.

Scale values of each of the dependent variables were arrayed by race and by family structure, and were treated through analyses of variance procedures for two-way factorial design with disproportional cell N's. Further, the relationship between age, intelligence, and place of urban residence and each of the dependent variables was analyzed, to determine if these intervening variables were related to the dependent variables. Chi-square analysis was utilized to test the relationship between aspiration to and expectation of occupation that is person or non-person oriented, and family structure and race.

Among the subjects in this investigation, it was found that:

1. No significant association was observed between family structure and (a) level of occupational aspiration, (b) disparity between level of occupational aspiration and expectation, (c) self-esteem, (d) extrinsic work values, and (e) aspiration to or expectation of an occupation that is person or non-person oriented.

2. No significant association was observed between the interaction of race and family structure and (a) level of occupational aspiration, (b) disparity between level of occupational aspiration and expectation, (c) self-esteem, (d) extrinsic work values, and (e) aspiration to and expectation of an occupation that is person or non-person oriented.

3. No significant association was observed between race and (a) level of occupational aspiration, (b) disparity between level of occupational aspiration and expectation, (c) extrinsic work values, and (d)aspiration to or expectation of an occupation that is person or non-person oriented.

4. A significant association was observed between race and self-esteem, and between place of urban residence and self-esteem. Place of urban residence, however, did not account for a significant increase in the proportion of variance of self-esteem scores, beyond that accounted for by race alone, as determined by a step-wise regression analysis.

Results were interpreted as suggesting that society in general, and peer groups in particular, may provide compensation for father absence, at least with respect to the vocational development variables investigated. It was concluded that insufficient evidence exists to support the view which suggests the deleterious effects upon vocational development of living in a fatherless family. Since few generalizations about the vocational development of fatherless youth, either black or white, are supportable, it was urged that those who work in a helping relationship free themselves of stereotypic views of these youth.

49. Kingsley, Leonard D. The Development Of An Area Vocational School: History, Issues, and Planning Implications. The University of Toledo, 1972. 164p. 72-20,181.

The establishment of Penta County Joint Vocational High School represented a pioneering effort in providing vocational education. Penta County JVS was unique in that it was (1) the first school established as a result of an agreement among city and rural school districts to pool their resources to provide vocational education: (2) the first school to serve students on an area wide basis with comprehensive offerings in all of the vocational service programs; (3) the first joint vocational school to provide a comprehensive offering of all subjects, thus permitting students to be in attendance on a full day basis; (4) the first to offer vocational education programs to a wide range of student ability levels; and (5) the first school to provide some of the newer vocational programs such as horticulture, industrial agriculture mechanics, and child care.

The purpose of the study was to record those events associated with the establishment of Penta County JVS. The information was presented in such a way that parts of it may be used independently by those who may have a need for this information in connection with the formation of future schools.

Vocational education has evolved through several centuries. From the time when man first identified "callings" or "vocations" through the twentieth century when legislation was formulated to support and encourage vocational training there has been recognition of the need for the development of salable skills. The greatest impetus was given to the joint vocational school movement when the Vocational Education Act of 1963 was passed by Congress. Funds provided by this Act stimulated activity to improve and upgrade vocational education programs. These national developments were a prelude to the establishment of this school.

Information for this study was secured from persons closely associated with the formation of the school as well as from the existing files and archives. The data has been presented in chronological order with a review of the decision-making activities engaged in prior to the opening of the school.

A review of the many events associated with the establishment of Penta County JVS revealed that the most important issues confronting the joint vocational school leadership were: (1) problems associated with securing cooperation of school districts; (2) funding considerations; (3) status or recognition of vocational programs to be offered; (5) staffing of the joint vocational school; and (6) the operational relationships with member school districts.

Recommendations to those planning similar schools growing out of the study were: (1) endeavor to develop a grass roots recognition of the need for comprehensive vocational education programs; (2) develop a clear understanding of the uniqueness of the JVS in terms of the costs associated with the operation; (3) select vocational programs which have been successful in other Ohio communities with similar employment opportunities. To provide ample opportunities for all levels of the school leadership to consider means of resolving operational problems. Recommendations directed to the Penta situation were: (1) plan to make information relating to the establishment of Penta County JVS a part of the school district archives; and (2) prepare a record of the operation of Penta County JVS covering the period from 1965 through 1971.

50. McIntyre, Lonnie D. Jr. The Occupational Knowledge, Perceptions and Values, Deemed Important With Respect To Work and Occupational Goals As Identified By Two Groups Of Sixth Grade Inner-City Youth. Indiana University, 1972. 166p. Chairman: Dr. Harold G. Shane. 73-10,848.

The purpose of this study was to compare the occupational knowledge, perceptions, and values, deemed important with respect to work and occupational goals as identified by two groups of sixth grade, inner-city youth. Also, the study was designed to ascertain what differences, if any, existed between two groups of students who attended different schools--one selected because it had a predominantly black enrollment and the other because it was a predominantly white school.

Moreover, the following subordinate purposes lent direction to the study: to assess sixth graders' knowledge of high school programs and educational plans, to determine who the significant persons were in the lives of the sixth graders, to assess the accuracy of sixth graders' perceptions of the future demand, the education required, and the presumed salary earned by persons in ten selected occupations, to ascertain whether differences existed between the occupations listed as "most familiar" by the black and white students, to determine if differences existed between black and white students' perception of "most desired" occupations, to ascertain what differences existed between black and white sixth graders' perceptions of occupations they actually expect to enter, to determine to what extent sixth graders associated college level training with employment, and to ascertain if differences existed between black and white children with respect to work values.

The subjects in the study were drawn from seven classes of sixth graders from two schools in a mid-western city. The survey instrument consisted of a questionnaire which was designed and constructed by the investigator, and an adaptation of Super's Works Values Inventory. The Yale 2 and Yale 3 programs were used to organize the data into percentage, correlational, and frequency tables. A non-parametric measure, the chi-square test, was selected to test the statistical hypotheses.

A major conclusion was the sixth graders had grossly inaccurate perceptions of the salary earned and the education required for the occupations listed in the study. This situation partly can be explained by the fact that sixth graders tended to discuss future plans with their parents and relatives and not with work-related persons or school-related persons. Also, they were not knowledgeable of academic programs offered in high school. Moreover, the persons most admired by sixth graders were parents and friends. These findings would tend to narrow the range of knowledge sixth graders were exposed to concerning occupations.

In general, it was concluded that sixth graders associated at least a modicum of college training with obtaining the jobs they desired. This association held true regardless of the level of education required for the job. Additionally, it was concluded that sixth graders were reasonably sure of the types of jobs they wanted and they were sure these jobs required some college level preparation. This situation was even more likely to be true for black respondents than for white respondents.

Finally, it can be concluded that racially there are no differences in the work values deemed important by sixth graders. It had been anticipated that economic returns would be a motivating value for choosing a job but this was not borne out by the results of the present research study.

51. Nash, McKinley Merchand. An Investigation Of the Relationships Of Knowledge Of Occupations and the Educational, Personal, and Social Characteristics Of Black Secondary Students. University of Illinois at Urbana-Champaign, 1972. 158p. 73-10,011.

The purposes of this study were (1) to expand the objective evidence that is available pertinent to Black students' knowledge of occupations, (2) to provide objective evidence of the amount of knowledge of the occupations possessed by southern Black male secondary students, (3) to provide information concerning the relationship of selected educational, social, and personal characteristics with the amount of knowledge of occupations possessed by southern Black secondary students, and (4) to provide educational planners, administrators, and counselors with data to assist them in the development of programs of occupational information that are relevant to the needs of Black teen-agers.

This study was based upon data collected from 10th grade boys enrolled in a predominantly Black high school in a southern metropolitan area.

The procedures for gathering data fell into two categories. They were the group data procedures and the procedures for gathering data from school records. The group data procedures included the Parnes Occupational Information Test and the Sims SCI Occupational Rating Scale which were included in a Questionnaire administered at a group session. The procedures for gathering data from school records included a review of the school test records to obtain scores from the California Test of Achievement, and data pertaining to the educational and social characterictics of the subjects.

Major Findings

1. The subjects had a limited knowledge and awareness of occupations.
2. Reading achievement was associated with the knowledge of occupations scores although all written material was read aloud to the subjects in a group setting.
3. The level of education of the head of household was associated with the knowledge of occupations as measured by the Occupational Information Test.
4. The subjects were not aware of the educational requirements of their aspired or expected occupations.
5. The educational and occupational aspirations of the respondents were not consistent with their educational programs.

52. Scheri, John C. The Relationship Of Independent Work Experience To the Vocational Maturity Of Eleventh Grade Males. University of Virginia, 1972. 81p. Chairman: Dr. Richard L. Beard. 72-23,442.

The purpose of this study was to investigate the influence of factors purported to be related to vocational maturity. Particular attention was given to the relationship between independent work experience and vocational maturity. In addition, the relationship of age, intelligence, grade point average, and socio-economic status to vocational maturity were examined.

The 181 subjects chosen for the study were all the male members of an eleventh grade class at a northeastern regional high school. Part-time employment opportunities for students in this suburban area are plentiful. There were 89 males with part-time work experience and 92 without any previous work experience.

Data for the investigation were collected from several sources. Ages, IQ scores, and grade point averages were obtained from student personnel records at the regional high school. An identification form completed by the subjects provided part-time work histories as well as father's or head-of-household's occupations which were classified according to a socio-economic status scale. State records of part-time working certificates issued to students served as a resource for verifying data on total part-time work duration and total number of jobs held.

The Vocational Development Inventory (VDI) was administered to all subjects to measure their vocational maturity. Scores from the 50 item objective instrument were analyzed in terms of the other data collected. A correlation analysis indicated that a linear relationship existed between IQ scores and grade point averages (+0.54) and IQ scores and vocational maturity scores (+0.46). Little correlation was evident among the other factors examined in the study.

An analysis of variance was employed to compare the VDI scores between the work experienced group and the work inexperienced group. An F test showed that the variance was not significantly greater

greater between the groups than within the groups.. In a further effort to identify a relationship between VDI scores and work experience, an analysis of covariance was utilized to compare the groups by compensating for variations in IQ scores. However, this analysis failed to disclose any significant findings.

The final procedure employed in the analysis examined the responses to each inventory question by the work experienced and work inexperienced groups. In the case of five questions previous work experience was related to the way these questions were answered. A large percentage of workers answered these questions in an immature direction.

An important conclusion reached as a result of this investigation is that part-time work experience influences vocational attitudes for some individuals in an immature direction. Therefore, it is reasonable to assume that more effective vocational counseling of students with work experience could result from the recognition of this tendency.

53. Sembric, Loretta Jane. The Use Of the Ohio Work Values Inventory To Determine the Work Values Held By Children According To Grade, Social Class, Race, and Sex. Ohio University, 1972. 132p. Director of Dissertation: J. Melvin Witmer. 73-4246.

The purpose of this study is to investigate the vocational values of children as measured by the Ohio Work Values Inventory (OWVI). The children are compared according to grades four and six, middle and lower class, Black and white, and males and females. The sample is composed of children from five elementary schools in an urban area of Virginia.

The children were classified according to social class using Hollingshead's Two-Factor Index of Social Position. Essentially, the head of the household's occupation and education are used to determine a family's social position. The Ohio Work Values Inventory measured the vocational values of altruism, object orientation, security, control, self-realization, independence, money, task satisfaction, solitude, prestige, and ideas/data orientation.

A 2 x 2 x 2 x 2 multivariate factorial design was used to analyze the data. A total of 15 null hypotheses were tested at the .01 level of significance. The first four hypotheses corresponded to the four main effects of grade, social class, race, and sex. Hypotheses 5-15 corresponded to the first, second, and third order interactions. The findings of this investigation show that there are no significant interactions among grade, social class, race and sex on the 11 vocational values as measured by the OWVI. For the main effect of grade, children is the fourth and sixth grades differ significantly in their vocational values. The discriminating values are control, self-realization, task satisfaction, and ideas/data organization. Children in the middle and lower social classes do not differ in their vocational values. That is, middle and lower social classes express similar vocational value orientations. Black and White children do not differ in their vocational values. Thus, Black and White children respond in a similar manner on vocational values. There are significant differences among the sexes on vocational values. The values of altruism, object orientation, control, money and task satisfaction appear to contribute to the difference. Females place a higher value on altruism and task satisfaction than do males. Males value money and ideas/data more than females.

It appears that vocational values are developmental and that they can be measured by the fourth grade. Values undergo noticeable changes between fourth and sixth grade and part of the guidance function and the educational process should be to help children examine these values.

Although this study does not find a significant difference in vocational values among middle and lower class children, guidance counselors and teachers should retain social class as a possible influential variable.

This study does not show differences in vocational values among Black and White children. Therefore, while minority groups may have special vocational problems one must not assume that they hold different work values.

The findings of this study show that there are sex differences in choice of vocational values among fourth and sixth graders. The guidance counselor and teachers should be sensitive to the individual needs of children and not assume that because of one's sex a particular vocational role or value is more desirable.

This study has the limitation of having a large proportion of the children from military families. This biasing effect may have contributed to the nonsignificance of social class. Therefore, it would be beneficial to conduct a similar study with children of parents who have diversified employment. A study using the OWVI may be undertaken to assess developmental changes, changes due to the effects of a career guidance program, and further exploration of cross-cultural differences.

In conclusion, vocational values appear to be important to elementary school age children. The elementary school child should be exposed to situations and experiences through which he can explore, discuss and examine his work values.

54. Wilkins, Lacy. A Study Of Tenth Grade Boys' Educational Aspirations and Occupational Goals In Six High Schools Of Varying Social Class and Racial Composition. George Peabody College for Teachers, 1972. 197p. Major Professor: Dr. James W. Whitlock. 72-25,369.

The purpose of this study was to investigate tenth grade boys' educational aspirations and occupational orientations in six Nashville high schools, two of which were white, two integrated, and two black. One school in each racial category was designated moderate social class and one low social class. Selection of schools was based on Title I information, reading achievement scores, counselor interviews, and census tract data.

The primary hypotheses were that school social class would be positively related to boys' aspirations, that school race and social class would be positively related to their occupational orientations, and that boys' perceptions of the educational requirements necessary for the attainment of stated occupational goals would be more accurate in the two white schools than in the integrated or black schools. It was also hypothesized that perceptions of boys in the two integrated schools would be more accurate than those of boys in the two black schools. These hypotheses were tested independently and with twelve controls: achievement, intelligence, student social background, parental press, teacher press, grade point average, older siblings in college, number of vocational courses enrolled in, best friend's plans, graduation plans, student race, and parental visits to the school.

The instruments used were a student questionnaire, constructed by the researcher, and a counselor interview schedule. An overall response rate of 74 per cent was obtained.

Findings

The results of the study revealed that, while student educational aspirations were slightly higher in the moderate income schools, there was no significant relationship between aspirations and school social class or school race. Occupational orientations were also slightly higher in the moderate income schools and in the white schools, but not significantly so. The accuracy of perception of the students was not related to either school race or social class.

When the control variables were entered, several differences emerged. With the exception of race and teacher press, all of the control variables were significantly related to boys' aspirations, regardless of school social class or race. Furthermore, boys' occupational orientations were found to be positively associated with background factors rather than school factors. Three control variables-achievement, intelligence, and grade point average-were associated positively with students' perceptions.

The overall conclusion was that background factors and personal attributes were more significant than school social class and race in the explanation of boys' educational and occupational ambitions.

Several implications were drawn. It was suggested that if one of the functions of the public high school were to provide students with occupational information and a more satisfactory understanding of their future roles, the counseling function should be expanded to include occupational counseling at the elementary level and continuing on through schooling. Also, it was suggested that the importance of vocational education be emphasized to the public through systematic information programs. In conjunction with both implications,the necessity for parental-school interaction was stressed. A final normative implication was that, if the gap between achievement and aspirations and between achievement and occupational orientations were to be bridged, the schools must be more completely integrated. Especially did this appear salient to black students.

It was suggested last that future research focus more carefully on perhaps one dependent variable, such as student aspirations. The researcher might concentrate more on school and background correlates of aspirations over time, as well as the degree to which a student and his parents perceive his ever achieving his aspiration. In addition, more careful attention should be paid to the study of school effects other than class or race, such as staff characteristics.

55. Hawxhurst, Donna May. The Effect Of A Structured Vocational Exploration Task On Vocational Choice Attitudes and Awareness Of Vocational Choice Factors. Arizona State University, 1973. 151p. Chairman: Dr. Garth Blackham. 73-387.

The purpose of this study was to investigate the effectiveness of a Structured Vocational Exploration Task (SVET) for an eighth grade population, identified as a group who have a high probability of dropping out of school after the eighth grade.

The sample for this study was drawn from the population of eighth-grade students at Murphy Elementary School No. 1, in Phoenix, Arizona. Stratifying for equal numbers of males and females, 42 subjects were randomly selected from the population. A total of 21 subjects each were randomly assigned to the experimental and control groups, stratifying again for equal sex distribution. The experimental subjects were then randomly assigned to one of three replicated treatment groups, identified to participate in the SVET.

The Structured Vocational Exploration Task was an adaptation of a programmed Vocational Exploration Group (VEG) kit developed by Calvin J. Daane. The SVET was designed to provide a general orientation to career exploration by developing personalization of the world of work through consideration of four critical choice areas: job function, job satisfiers, job demands and training requirements. The sequenced task prescriptions were modified to provide a framework in which participants could think about the world of work in the context of their ongoing life experiences. Each of the three treatment groups consisted of seven participants and one group leader.

The criterion instruments utilized were the Vocational Development Inventory Attitude Test and the Inventory of Career Choice Factors. Pretest, posttest and delayed test observations were made on the entire sample for each criterion instrument.

An analysis of variance with repeated measures was used to assess the effects of the treatment on change in maturity of vocational choice attitudes and on change in awareness of vocational choice factors.

The findings which can be drawn from the analysis of the data are as follows: 1. When the experimental and control groups were compared, the treatment did not prove to be more effective in facilitating more mature vocational choice attitudes, as measured by the Vocational Maturity Score of the Vocational Development Inventory. 2. When the experimental and control groups were compared, the treatment did not prove to be more effective in facilitating increased awareness of vocational choice factors, as measured by the Choice Factor Score of the Inventory of Career Choice Factors.

As a result of the statistical analyses of the criterion measure data, performed to test the null hypotheses stated in the study, the following conclusions can be stated: 1. The effects of the treatment failed to produce a significant difference in vocational maturity, as measured by the Vocational Development Inventory. 2. The effects of the treatment failed to produce a significant difference in awareness of vocational choice factors, as measured by the Inventory of Career Choice Factors.

Music, Art and Drama

56. Heidsiek, Ralph George. *Music Of the Luiseño Indians Of Southern California-A Study Of Music In Indian Culture With Relation To A Program In Music Education*. University of California, Los Angeles, 1966. 469p. Chairman: Professor Maurice Gerow. 66-4745.

Music and music information of the Luiseño Indians of Southern California have not been available for use in music education. When school students have studied the Indians of this area, they have been given music chosen from other Indian tribes. No understanding of music and culture of Southern California Indians and their contribution to California life and history can develop. This dissertation was undertaken to bring forth authentic music of the Luiseño Indians, a prominent Southern California Indian tribe still living today, and relate it to a program of music education.

The archives of the Lowie Museum, Berkeley; the Library of Congress; the University of Indiana; and the Southwest Museum, Los Angeles, were found to contain records of Luiseño Indian music. The Cook record collection, 1934-37, from the Southwest Museum, because of its variety of content and quality of sound, was used as the source for selection of music for this study. The collection was transferred through electronic filtering from the original aluminum phonodiscs to tape. Transcriptions of fifteen songs were made into standard notation. These were analyzed. Field work was undertaken to provide further information.

The Luiseño were a large ethnic unit, the southwestern extension of the Shoshonean segment of the Uto-Aztecan language family. They had a well-defined concept of ownership and of knowledge-power which they called *ayelkwi*. Their mythology explained the creation of the world and its contents by birth. It provided religion, ceremonial content and procedure, and inspiration for religious songs.

The most important Luiseno ceremonies were those of mourning and adolescence. All ceremonies required extensive use of songs, dances, musical instruments, costumes, and implements. Luiseño songs and dance maintained essential positions in ceremony. Song series were functional in the service of communication with forces in the environment.

Songs of the Luiseño stress the melodic intervals of a major second and minor third. They include melodic perfect fourths, perfect fifths, and repeated tones. The melodic rise is found. The tonal center is generally the most frequently heard tone. The songs range from a perfect fifth to a perfect twelfth. Scales are pentatonic and hexatonic. Duple meter is prevalent. Triple meter occurs in dancing songs. Repetitious rhythmic patterns and phrases are found. The rattle, grunting, and foot taps provide strong metric accent. The mourning songs are strophic or reverting in duplex, triplex, or quadruplex form. The game and children's songs are iterative.

Dances are generally unstructured ceremonial movement or ritualistic dance. The latter is either quiet and constrained or vigorous and demonstrative.

Luiseño musical instruments included rattles, striking sticks, struck baskets, flutes, whistles, and bull-roarer (ceremonial signal).

Twelve Luiseño songs were organized into eight study units of Luiseño music for use by teachers in music education. The units consist of an introduction and orientation, study objectives, and the units themselves. The units are a body of information and music related to a ceremony or other social activity. Each unit consists of background information about that activity, related mythology, dance directions, descriptions of instruments, implements, and costumes, and songs and their unique elements for study.

57. Brown, Greeta Elaine Knight. An Adaptation In Music Listening: A Program Designed For Eskimo Children In Grade One. University of Oregon, 1972. 147p. Adviser: Dr. Robert E. Nye. 72-20,908.

Research, public hearings, and observations have proved that the Eskimo children in the State of Alaska do not reveive parity education with their urban and suburban American peers. Several factors were shown to have influenced that situation. Two factors were shown to be of greatest influence: linguistic differentials and the cultural socioeconomic disparity of the Eskimo peoples. The Eskimo elders have asked for quality education for their children. Innovative and adaptive teaching were cited as the means to accomplish that end. Some of the disciplines of education were shown to be effecting these necessary changes. Music, an important part of the total curriculum, was shown to have had meager beginnings. As a point of departure, then an adapted program in music listening was designed for Eskimo children in the first grade.

Before beginning the adaptations proper, it was necessary to make a thorough study of the Eskimo language. That study revealed it to have little relationship to English, the language of the classroom. Phonology, hazardous single sounds and sound clusters were studied in order that they might be avoided in presenting lessons to Eskimo children.

It was necessary to become familiar with the socio-cultural life-style of the Eskimos. Their life-style was found to be appreciably different from the American norm. The music program, therefore, had to be adapted to the Eskimo children in a manner relevant to their life-style.

The Alaska State Department of Education has adopted five basic series in music. Each series has a recorded listening program. The recorded compositions were noted as to composer, title, form, instrumentation, and duration of recording. They were then presented in the form of teaching lessons for use in the classroom. Some recordings were found to be unsuitable for this program. In each instance, they were identified and their unsuitability was explained.

The adaptations were read and enthusiastically endorsed by Alaska's foremost authority in the education of Eskimo children, Winifred D. Lande, Director of the Alaska Rural School Project. It was concluded that this, then, was only a beginning in offering them a meaningful education in music

Four areas demanding further research or immediate attention were 1. research and innovative practices and policies in teacher education in institutions of higher learning, 2. attention at the State level to the teacher certification requirements, as well as a study of the total educational program for children in State-operated schools, 3. ethnomusicological studies which may become a part of the total music program for all children and to which Eskimo children may relate music of the Western world, and 4. an innovative, adapted program in the other segments within the discipline music: singing, instrumental playing, dancing, and creating.

The Eskimos are being rapidly absorbed by Western culture. They cannot become fully functioning members of that culture without meaningful, quality education. That education must begin no later than grade one.

58. Mills, James Charles. The Effect Of Art Instruction Upon A Reading Development Test: An Experimental Study. 157p. (Following page 150, previously copyrighted material not microfilmed at request of author. Available for consultation at University of Kansas Library). Major Professor: Dr. Phil H. Rueschhoff. 73-11,927.

This study was undertaken to explore the results of a particular method of teaching art upon rural Appalachian children's concept development. It was theorized in this study that art lessons that stressed the inclusion of details would bring about an increment in the treatment group's reading development and the quality of their drawings.

The problem analyzed was the immediate effectiveness of art instruction upon both the area of reading development and the quality of the art product. A classical paradigm for conducting an experimental research program was utilized. Control and treatment groups were randomly selected, a relevant experimental treatment provided, criteria identified, and a pretest-posttest program instigated. The sample used in the study included all children enrolled in the first grade of a rural Appalachian school. This sample consisted of twenty-six girls and twenty-six boys. The treatment group was given an art lesson each day for ten consecutive school days. During the experimental treatment, the main objective was to influence the children to include more details in their drawings. The control group had no formal art instruction during this period. The Metropolitan Readiness Tests, Form A, was administered for the pretest and Form B, for the posttest. The Draw-A-Man segment of these tests was used to evaluate the quality of the children's drawings.

Because the experimental treatment was concerned with changes brought about in the students' performances, it was deemed that pretest-posttest increments were of primary interest in this study. The Fisher t formula was applied to the data to test the hypotheses at the .05 level of confidence. The findings were as follows: (1) There was a significant pretest-posttest increment in the treatment group's scores on the Metropolitan Readiness Tests, (2) There were significant pretest-posttest increments in the treatment group's scores of four of the six Metropolitan subtests, (3) There was a significant pretest-posttest increment in the treatment girls' scores on the Metropolitan Readiness Tests (4) There was a significant pretest-posttest increment in the boys' scores on the Metropolitan Readiness Tests, and (5) There was a significant pretest-posttest increment in the quality of the treatment group's drawings. The control group's scores showed no significant increment on any of these criteria.

Based upon the findings, which were limited by the conditions and the design of the study, two general conclusions were proposed: (1) Rural Appalachian children's reading development can be improved through art lessons that stress the inclusion of details and (2) The quality of rural Appalachian children's drawings can be improved through art lessons that stress the inclusion of details. These conclusions suggest that art programs for rural Appalachian children should, to some degree, promote the ability to observe things more closely and in greater detail. The results of this study, far from being conclusive, indicate a need for further research concerning the transfer of learnings in art to other school disciplines.

Health, Physical Education, Recreation

59. Tefft, Virginia Jean. A Physical Education Guide With English Language Practice Drills For Teachers Of Navajo Kindergarten and Primary School Children. The University of New Mexico, 1969. 464p. 70-12,905.

It was the purpose of this study to devise a guide to teach physical education to Navajo children in the kindergarten and primary school. This guide was to be used to give Navajo children language practice in purposeful situations.

The study was divided into the following sections: (1) Review of relevant literature; (2) Selection of subjects for the study; (3) Devising and field testing the guide; (4) Collecting and evaluating the data. Two hundred and seventy-five primary school children in two Gallup-McKinley County elementary schools were taught physical education with language practice drills by eleven classroom teachers. At the conclusion of the study a team of language experts evaluated the language learned by the children.

The guide prepared for the kindergarten and first grade was found to have language that was too difficult for the kindergarten, as many of the children entering school had little or no English background. Teachers of the second and third grade groups considered some of the pattern practice rather contrived and preferred the use of informal responses to questions. Some drills were felt to be too simple for the third grade groups.

Conclusions. A well planned physical education program needs to be established before language practice can be meaningful to the children. Children tend to be free and responsive during the physical education class and engages in informal conversation. Oral language practice can be successfully incorporated into the physical education class period. There seems to be certain situations during the physical education class that do not lend themselves to language practice. It was difficult for the children to verbalize when they were participating in vigorous physical activity. At times, it was almost impossible for them to practice a motor skill and verbalize.

Is is recommended that the guide be revised so that a lesson series is constructed for each grade instead of one guide for each two grades. The guide so revised should be enlarged to a full year series rather than an eighteen week program as it now stands. A field test of the guide starting with language practice two or three weeks following the physical education program might produce a better atmosphere for language learning. Each lesson should be laboratory tested in order to determine the language best suited to each physical education lesson.

60. McCarty, Jacqueline Quinn. A Study Of Leisure Activities Of Taos Pueblo Indian Children. North Texas State University, 1970. 270p. 71-560.

The problem of this study was to secure data on leisure activities of children at the Taos Indian Pueblo in New Mexico.

The purpose was to analyze and describe these activites in order to permit conclusions to be drawn concerning the following questions: (1) What are the Taos Indian children's preferences for leisure activities at the Taos Pueblo? (2) Do children of the same Pueblo but of different sex have similar leisure activities?

Fifty Taos Indian boys and girls attending local schools were selected by random sample. Data were secured by administering a personal data sheet, Witty's Interest Inventory, and a questionnaire resulting from the pilot study.

Analysis of the findings gave rise to five major conclusions:

1. Within the cosmology of the Taos Indian child there exist three calendars which affect his leisure activities: the solar calendar, the ecclesiastical calendar, and the standard Gregorian calendar.

Connected with the solar calendar are many hidden ceremonies of the kiva societies. Events related to winter and summer solstices, such as relay races and corn dances, are an integral part of the solar calendar. This calendar is regulated in many instances by the Tribal Council.

The ecclesiastical calendar dates to the sixteenth centruy when Spanish clerics attempted to convert Indians to Roman Catholicism. Holy days of obligation, such as Dia de los Difunctos, as well as a galaxy of saint's days are singled out from the church's calendar for observance. Taos Indian children mark these events in many cases by attending church services, dancing and feasting.

The Gregorian calendar regulated school days, as well as national and state holidays. This calendar indirectly controls the amount of leisure time available.

The calendrical round of events structures many leisure activities of the Taos Indian child. On the other hand, there exists little organization surrounding many personalized interests such as hobbies, outdoor and indoor play.

2. Traditional male-female roles within the Pueblo Indian's culture may still be evidenced in Taos Pueblo children's leisure-time interests. Boys tend to be nature-oriented, while girls seem home-oriented. Kiva societies delineate male and female roles from the time of birth.

3. The absence of electricity in the majority of Pueblo homes is a key factor in influencing leisure activities. Television at the present time has not yet eliminated activities such as outdoor play, reading and hobbies. As a result, the Pueblo child is less educated in concepts conveyed through this media.

Having no telephones keeps the Indian child relatively isolated in his leisure play. There is little communication with non-Indian children.

Having few conveniences related to electricity requires the Pueblo child to spend more leisure time carrying water, chopping wood, and carrying refuse to ash heaps.

4. Two additional factors which contribute to the segregation of Indian children are use of his native tongue and the tribal kinship system.

The Taos Indian child's highly selective dialect of Tiwa is not spoken or understood by the greater portion of other southwestern Indians nor by members of the non-Indian society.

Pueblo children belong to a familial society. Recreation is a family affair clustering around births, marriages, feasts, and burials.

5. Pueblo activities are agrarian-oriented. Much of the children's time is spent canning, cooking, caring for pets and livestock, riding horses, tending gardens, and planting crops.

A list of implications are stated, and suggested goals for leisure education are proposed.

61. Roland, Nathan Lewis. A Study Of the Prevalence Of Health Problems As Reported By Advantaged and Disadvantaged, Black and White, Junior High School Girls On the Mooney Problem Check List and Through Medical Examinations. (Page 60, Appendix A: "Mooney Problem Check List," not microfilmed at request of author. Available for consultation at University of South Carolina Library). University of South Carolina, 1971. 74p. 72-12,023.

Sixteen hypotheses were developed to investigate the relationship between health problems of junior high school age girls and their socioeconomic and racial status. In addition, this study included an investigation of the validity of the health problems section of the Mooney Problem Check List (MPCL).

Four groups of thirty junior high school girls each were selected on the basis of the following four categories from information contained in school records: black advantaged, black disadvantaged, white advantaged, and white disadvantaged. Health problems were reported by the 120 subjects through use of the MPCL and by medical examinations administered by licensed medical personnel.

Specifically, the hypotheses concerned (1) variances in the number of health problems reported by different racial and socioeconomic groups, (2) validity of the MPCL, and (3) differences in prevalence of health problems between racial and socio-economic groups.

The data were analyzed for reliability by means of Spearman's Coefficient of Rank Correlation, and also were analyzed for differences in frequency of health problems between the racial and socio-economic groups by means of the Kruskal-Wallis one-way analysis of variance, with correction for ties.

The Coefficient of Rank Correlation showed acceptable reliability in test-retest situations for each of the groups investigated. The significant variance in the number of health problems reported between members of the four groups indicates a relationship between perception of health problems and racial and socioeconomic status. The analysis of variance also resulted in a significant difference between the number of health problems perceived by black students and the number of health problems reported through medical examination, thus suggesting that, for some sub-groups of school populations, procedures other than use of the MPCL might be more accurate in screening for health problems. Medical examination resulted in no significant differences in prevalence of health problems between the four groups.

62. Brogdon, Gayle Lyndon. A Comparison Of Physical Fitness and Anthropometric Measures Of Pre-Adolescent Mexican-American and Anglo-American Males. North Texas State Univerity, 1972. 178p. 73-12,908.

The problem of this study is that of comparing certain physical fitness and anthropometric measures for early adolescent Mexican-American and Anglo-American males. The purposes of the study are to determine if Mexican-American and Anglo-American males differ in physical fitness or anthropometric measures; to determine if the relationships between age and physical fitness, age and anthropometric measures, and anthropometric measures and physical fitness items are significantly different for Mexican-American and Anglo-American males; to compare the rate of maturation for pre-adolescent Mexican-American and Anglo-American males in physical fitness items and anthropometric measures.

The sources of data were 300 Anglo-American and 300 Mexican-American males between the ages of eight and eleven. The instrument used to determine the physical fitness of the subjects was the American Association for Health, Physical Education, and Recreation Youth Fitness Test. The battery includes sit-ups, pull-ups, shuttle run, 50-yard dash, standing broad jump, softball throw, and 600-yard run-walk.

Thirteen anthropometric measurements were secured from each subject. A Gulick tape, sliding calipers, standard platform scales, and a stadiometer were utilized in securing these measurements. The measurements include standing height, sitting height, weight, shoulder width, arm length, chest girth, waist girth, hip width, thigh girth, leg length, calf girth, foot length and arm girth.

The Scheffe test was used to test the significance of the mean differences between Anglo-American and Mexican-American males at the various age levels on physical fitness items and anthropometric measures. A two-way analysis of variance technique was used to test the differences between the total sample populations in physical fitness and anthropometric measures. Correlations were obtained for each of the different age levels and for the total sample population on the following: physical fitness and anthropometric measures, age and physical fitness measures, and age and anthropometric measures. The significance of the difference between the correlations was tested by the z technique.

The findings revealed significant differences between the Mexican-American and Anglo-American males in certain physical fitness items and anthropometric measures. The Anglo-American males were superior in performing sit-ups and the standing broad jump. The findings also revealed significantly larger anthropometric measures for the Anglo-American males in all but four measurements. These were hip width, shoulder width, waist girth, and chest girth.

The relationships between selected anthropometric measures and various physical fitness items were significantly higher for the Mexican-American males. When the single factor of age was correlated with each of the individual physical fitness items and each of the anthropometric measures, few significant differences were evident.

Based on the findings of this report the evidence seems to support the theory that differences in physical fitness and anthropometric measurements do exist between these sub-cultures in the United States. The Anglo-American males are larger in gross body size, and they are superior in performing selected physical fitness items.

Both groups exhibited higher body measurements and fitness scores at each succeeding age elvel. This denotes a relationship between age, physical fitness, and physical growth. Age, as a predictive factor, is equally important to the Anglo-American and Mexican-American students.

63. Pittman, Anne Myrtle. Recreation Activities Instrumental To Expressed Life Goals Of San Carlos Teen-Age Apaches. Stanford University, 1972. 313p. 72-20,740.

The purpose of this study is to identify the manifest reasons for selection of recreation activities as they are instrumentally related to the expressed life-goals of the San Carlos Apache teen-age Indian, whose reservation is located in the east-central portion of Arizona. This study attempts to provide a realistic basis for organizing a relevant and viable community recreation system with emphasis on programs for teen-agers thirteen through nineteen years of age.

Procedure

A picture-stimulated interview technique was used to elicit responses from 43 teen-age San Carlos Apache Indians. The technique is an appropriate modification of the Instrumental Activities Inventory developed by Drs. George and Louise Spindler of Stanford University and applied by them in an analysis of Blood Indian acculturation.

Instrumental activities are defined as those activities an individual engages in for the achievement and maintenance of a life style and status in the social groups of which he is a member or aspires to be a member. The Instrumental Activities Inventory consists of line drawings depicting specific instrumental activities operating in the social environment of the San Carlos Apaceh Indians.

The unstructured taped interview technique consisted of elicting free responses to a series of line drawn pictures of seventeen recreation activities available and known to the San Carlos Apache teen-agers. It is assumed that the choices of activities, from among the alternatives, are actual instrumental activities to the respondents which can be related to their life-goals.

The interviews were conducted in both Apache and English. A male Apache interpreter assisted in the interviews. Protocols were analyzed descriptively, using rank order statistical methods and Kendall's tau coefficient.

Results

Activities instrumental in providing an opportunity for achieving social status were ranked first. The respondents had an active and dynamic interst in physical activities, particularly in activities demanding speed and agility. San Carlos teen-agers distinguish and assign activities by the sex of the participant. Activities identified as instrumental in achieving and maintaining a sense of distinctiveness appear to indicate that tribal identification is strong among contemporary San Carlos teen-age Indians. Other findings were: identification and ranking of activities among districts, grade levels, and age levels were in agreement; districts, grade levels, and age levels agreed on the positive or best liked activities; districts and age levels agreed only on the least liked or negative activities.

Conclusions

Activities identified as instrumental in providing opportunities for maximizing social interaction and emphasizing sociability, visiting, gathering, and being with friends are of central importance to the San Carlos teenagers. The reasons most manifested for selecting activities centered on the way in which respondents structured their interactions, through roles and statuses, with other members of their society. Thus, the primary basis for their choices continues to be the outgrowth of their social structure which emphasizes the essentiality of the individual's relationship with other members of his society.

Activities identified as instrumental in providing opportunities to increase skills, improve oneself, and have fun, suggest a need for continued decentralization of the location of these activities in order to serve current interest and maintain present rate of participation.

Activities identified as instrumental in achieving and maintaining a sense of distinctiveness should be programed to foster pride and engender early interest and involvement in elements of Apache culture among the younger generation.

Cultural tradition persists in sex role assignments. Recreation activities should be separated on the basis of sex unless otherwise culturally acceptable to participants.

64. Williams, Wilbert Curtis. The Relationship Of Race and Socio-Economic Status To Motor Ability and Athletic Skill In Elementary School Children. (Previously copyrighted material on several pages not microfilmed at request of quthor. Available for consultation at University of Georgia Library). University of Georgia, 1972. 154p. Supervisor: Dr. Robert T. Bowen. 73-5808.

The purpose of this investigation was to determine if race and/or socio-economic status are related to the early development of motor ability or to athletic skill in elementary school children. Specifically the investigation sought to determine the existence or non-existence of special innate motor and/or rhythmic characteristics in Blacks.

Three Northeast Georgia school systems provided testing centers for acquiring a representative sample for this research project. The experimental sample was drawn by administering the Peabody Picture Vocabulary Test to over one hundred and fifty third grade boys from two racial groups. The MA obtained on the Peabody Picture Vocabulary Test was the criteria used for rank order placement of each subject within his prospective cell. The final selection was based on each student demonstrating a CA between 7.5 and 8.5, as determined from the school records.

An index of Status Characteristics was tabulated to ascertain the social class position of those subjects possessing the desired chronological age. All subjects were then assigned to their respective groups, in matched pairs, being equated on socio-economic status, race and rank order placement. The sample was further divided into six sub-groups representing three broad areas of socio-economic positions; upper, middle and lower class.

Motor ability and athletic skill was determined by administering the Georgia Adaptation-Children's Physical Developmental Scale and an Athletic Skill Survey to each subject. This data was then subjected to an analysis of variance technique to ascertain the differences existing between the independent and dependent variables established within this investigation. The Duncan's New Multiple Range Test was employed to determine the exact location of the differences revealed by the analysis of variance. In addition, Pearson Product-Moment correlation coefficients were computed to determine the interrelationships between motor ability and the four items (50-yard dash, shuttle run, 400-yard-walk-run and vertical jump) comprising the Athletic Skill Survey.

An analysis of the data revealed differences existing between Blacks and Whites, and between the three socio-economic status levels on motor performance. Blacks were found to be significantly superior to Whites as compared on motor ability scores. In addition, Blacks at each level of socio-economic status consistently demonstrated higher motor ability scores than did Whites at comparable levels. Further analysis of the data revealed that as the level of socio-economic status increased for Blacks, motor ability scores also increased. However, when socio-economic status levels were compared on motor performance without regard to race non-significant differences were found.

Further results found Blacks excelling in three out of four of the items comprising the Athletic Skill Survey. Blacks posted greater mean scores on the 50-yard dash, 400-yard run-walk and the vertical jump. Although greater cardio-vascular endurance has been reported in Whites, Blacks out ran Whites on the 400-yard run-walk at each level of socio-economic status. Whites posted greater mean scores on the shuttle run.

Significant differences were found to exist between the two racial groups on the 50-yard dash and the vertical jump favoring Blacks. With reference to socio-economic status, the 400-yard run-walk and the vertical jump were found significant at the .05 level. An analysis of the Duncan's New Multiple Range Test indicated that the upper socio-economic status levels demonstrated the greatest degree of difference for both items.

It was concluded that the greater motor development and athletic skill in Blacks may not be a racial characteristic as much as a function of their socio-economic environment. Further that the motivational drive toward excellence in athletics may result from the influences of the social milieu and not from any special genetic equipment.

Foreign Language

65. Anderson, Etta Maud. Correlates Of Success In Foreign Language Learning For Black Inner-City High School Students. The University of Connecticut, 1972. 111p. 73-9851.

This study investigated the relationship of certain variables to foreign language learning for black inner-city high school students.

Four classifications of variables were studied, namely, cognitive, psychological, sociological, and physiological. English grade point average, the Vocabulary and the Language Analysis tests of the Pimsleur Language Aptitude Battery were employed as the cognitive variables. The Jr.-Sr. High School Personality Questionnaire of the Institute for Personality and Ability Testing measured the extraversion aspect of personality. Gardner and Lambert's Orientation Index and Attitude Scale were used as measures of sociological variables. The Sound Discrimination test and the Sound Symbol Association test of the Pimsleur Language Aptitude Battery measured auditory ability which was considered a possible physiological variable. The Listening, Reading and Writing scales from the Modern Language Association of America Cooperative Spanish tests were used as criteria.

The research was conducted in a typically black inner-city high school where black enrollment was over ninety-five percent. Only black students who were completing their first or second year of Spanish were included in the study. A total of 177 students participated.

The data were subjected to stepwise multiple regression analysis and the resulting product moment multiple correlations and regression equations were examined. The primary findings were the following:

1. Cognitive variables (with the exception of English grades) were not significantly related to any of the three measures of language learning. English achievement significantly predicted performance in Spanish Listening and Writing ($p<.01$)

2. With respect to the psychological variable, extraversion, it was found that the extraverted Ss scored lower in Spanish, Reading and Writing. ($p<.05$ $p<.01$ respectively)

3. Each of the two sociological variables was significantly related to one area of language learning. Attitude predicted Reading performance and Motivation predicted Writing at the .01 and the .05 level of significance respectively.

4. The physiological variable, sound discrimination was significantly related to the three criteria variables ($p<.05$).

The factors affecting the results of the study were discussed. The variables used in the study were student-related. It was recommended that external variables such as teacher competence and student socioeconomic status be included in future test batteries. The need for additional research in the area of foreign language study for black inner-city students was discussed. The results of this research contribute needed information for curriculum planning.

66. Lanclos, Teresa Gloria. *A Linguistic Profile Of Acadian-French Kindergarten Children St. Landry Parish, Louisiana*. The University of Texas at Austin, 1972. 146p. Supervisor: Muriel Saville-Troike. 73-7593.

This study in 1971-72 investigated phonological and morphological characteristics of subjects in relation to race, sex, intelligence, socio-economic status and age using a kindergarten population in St. Landry Parish, Louisiana. A total of 134 subjects were grouped in terms of high, middle and low intelligence using the scores obtained from the Goodenough-Harris Draw-A-Man test. The subjects were grouped in age in terms of high, (5.6-6.1 years) and low (5.0-5.5 years) and as mid and low socio-economic status. The subjects were administered a repetition test of 15 sentences in standard English, 15 sentences in standard French and 15 sentences in Acadian-French. A free production was also administered. Responses from the repetition test and the free production test were taped and later transcribed. Analysis of data included an analysis of variance using a computer program ANOVAR from the EDSTAT-V program library available at the University of Texas and a T-ratio using the direct-difference method. A content analysis was performed on the repetition responses and in free production.

Results of the statistical analysis of the study showed that significant differences found could be attributed to race, age, and socio-economic status. No significant differences were found that could be attributed to intelligence, sex or bilingual responsiveness. No significant differences were found between the frequency and kind of deviations occurring in repetition and in free production.

The content analysis for the repetition test and the free production speech allowed the rejection of the general null hypothesis: no nonstandard phonological and morphological characteristics are found in the oral language of kindergarten children from St. Landry Parish, Louisiana, with respect to subject-verb agreement with the third person singular, present tense and the phonological substitution /d/ for /d/ and /t/ for /o/. More evidence was needed to reject the hypothesis with respect to pluralization of nouns and the possessive formation of nouns and the substitution of the pronoun *them* for *they* and *their*.

Tutoring and Individualized Instruction

67. Olsen, Clarence Randall. The Effects Of Enrichment Tutoring Upon Self-Concept, Educational Achievement, and Measured Intelligence Of Male Underachievers In An Inner-City Elementary School. Michigan State University, 1969. 224p. 69-20,904.

There were two purposes for this study. The primary purpose was to investigate the effects of enrichment tutoring upon (1) self-concept, (2) educational achievement, and (3) measured intelligence of male underachievers in an inner-city elementary school. A secondary purpose was to assess the effectiveness of enrichment tutoring as viewed by the participating teachers in the school.

Treatment involved the assignment of volunteer enrichment tutors to work with underachieving pupils in areas of academic and enrichment needs. The tutors were directed to work with pupils in an empathic and understanding manner, while expecting and encouraging pupils to strive to perform in accord with their individual potential.

Sixty-five second-, third- and fourth-grade male pupils were defined for possible participation in the enrichment tutorial program. Those selected as possible participants were pupils who had been identified as underachievers by their classroom teachers and who, in addition, scored two months or more below grade level on a standardized achievement test. After identification, the pupils were stratified by grade level and randomly assigned on a proportional basis by grade level to experimental and control groups. At the end of the treatment period the total experimental and total control groups each contained 30 members. At the second-grade level the experimental and control groups were composed of 11 members each. The experimental group at the third-grade level contained nine members; while the control group at the same level contained eight members. At the fourth-grade level the experimental group was made up of 10 members, and the membership in the control group was composed of 11 pupils.

Changes in self-concept, educational achievement and measured intelligence were expected as a result of the treatment. The measures utilized to measure changes were, respectively: the Coopersmith Self-Esteem Inventory, the California Achievement Test and the California Short-Form Test of Mental Maturity. The instruments were administered to the experimental and control groups before and after treatment. The following primary research hypotheses were investigated.

H_1 The reported self-concept scores of inner-city elementary school male underachievers who experience enrichment tutoring will be more positive than the scores of inner-city elementary school male underachievers who did not experience enrichment tutoring.

H_2 The educational achievement scores of inner-city elementary school male underachievers who experience enrichment tutoring will be more positive than the scores of inner-city elementary school male underachievers who did not experience enrichment tutoring.

H_3 The measured intelligence scores of inner-city elementary school male underachievers who experience enrichment tutoring will be more positive than the scores of inner-city elementary school male underachievers who did not experience enrichment tutoring.

Each instrument used to measure change reported a total score and several subscores for the variable measured. A major statistical hypothesis and several statistical subhypotheses were cast for each of the research hypotheses. A complete set of the hypotheses was cast at each grade level--two, three and four--resulting in a total of 33 statistical hypotheses.

Statistical comparisons of the groups were accomplished by analysis of covariance tests. F values were utilized to determine significance and the level of significance was placed at the .05 level. Only subjects who were involved for the total treatment period were included in the analysis of data.

In addition to the statistical analysis, the reported opinions of teachers on an evaluation form were assessed to determine the effectiveness of enrichment tutoring. Only information which related to self-concept development and to educational achievement was reported by the teachers for the participating pupils.

The findings of the study indicated:

1. There were no significant differences between tutored groups and non-tutored groups for total self-concept (composite self scale), self-concept (self-concept sub-scale) and school self-concept (school self subscale) at the second-, third, and fourth-grade levels. This was also true for social self-concept (social self subscale) at the second- and third-grade levels.

2. There were no significant differences between tutored and non-tutored groups for total educational achievement (total achievement battery results) or reading achievement (reading subtest results) at the second-, third- or fourth-grade levels. Likewise, no differences were found between either tutored and non-tutored groups for arithmetic achievement (arithmetic subtest results) at the second- and fourth-grade levels or tutored and non-tutored groups for language achievement (language subtest results) at the third- and fourth-grade levels.

3. There were no significant differences between tutored and non-tutored groups on changes in total measured intelligence (total battery results), language intelligence (language subtest results) or non-language intelligence (non-language subtest) at the second-, third- or fourth-grade levels.

4. At the fourth-grade level, the tutored group positively and significantly exceeded the non-tutored group in social self-concept (social self subscale).

5. At the second-grade level, the tutored group positively and significantly exceeded the non-tutored group in language achievement (language subtest results).

6. At the third-grade level, the tutored group positively and significantly exceeded the non-tutored group in arithmetic achievement (arithmetic subtest results).

7. Teachers reported ppsitive changes in self-confidence, self-attitudes and the self-worth on the part of participating pupils.

8. Teachers reported improved study habits, improved grades and improved reading on the part of participating pupils.

68. Hicks, Joyce Patricia Webb. A Study Of the Effectiveness Of Self-Conceptual Development and Academic Tutoring On the Achievement Of Inner-City Youths. The Ohio State University, 1971. 111p. Adviser: Professor Donald P. Sanders. 72-4523.

The purpose of this study was to determine the effects of self-conceptual orientation and academic tutoring on the academic achievement of inner-city youths of Columbus, Ohio. Participants were selected from a group of students who were enrolled in the tutorial program which was conducted by the Neighborhood House in the Wesley Sawyer Manor area.

Each participant was randomly assigned to either the experimental or the control group. The total number of participants in each group was 25. The experimental group was given two treatments: (1) self-conceptual orientation, and (2) academic tutoring. These treatments were administered for one hour (each) per week. The control group was given only academic tutoring for one hour per week.

The self-conceptual orientation treatment consisted of three major elements: (1) the development of a greater awareness and acceptance of self and others through classes in ethnic history, art, literature, and culture; (2) the development of a feeling of self-adequacy which focused on: (a) self-adequacy in terms of academic endeavors, and (b) self-adequacy in terms of personal advancement; (3) the identification of role expectations by providing an atmosphere of "openness" that would allow the participants to become involved in sharing his thougths, ideas, misconceptions, and feelings regarding his role, with his individual tutor or with members of the Neighborhood House staff.

Academic tutoring was provided in three ways: (1) through assisting the participants with those subject areas in which they were experiencing difficulty; (2) through academic skill building; and (3) through aiding the students in developing educational projects of their particular interest.

Through the cooperation of the staff and tutors of the Neighborhood House Tutorial Program, two instruments were administered to the participants at the beginning of the treatment and the same instruments were administered at the end of the treatment-which was four months later. Since tutorial sessions were held on a one-tutor-one student ratio, each participant was administered the instruments on an individual basis by his particular tutor.

To measure academic achievement, the California Achievement Test was administered. The Self-Concept and Motivation Inventory was used to measure self-concept.

This study, being exploratory in nature listed five objectives that it hoped to realize:

Objective 1: To ascertain whether there is any significant difference in the level of academic achievement of the participants enrolled in both the self-conceptual orientation and academic tutoring, and those enrolled in only academic tutoring.

The *t* test of significance indicated that, statistically, there was no significant difference in the achievement levels of students in either the experimental or the control groups which could be attributed to the treatments. The *t* value was based on a comparison of the pre- and post-test scores on the California Achievement Test.

Objective 2: To generate hypotheses for further studies utilizing the same or similar variables.

A *t* test analysis of the pre- and post-test scores on the California Achievement Test and the Self-Concept and Motivation Inventory yielded significant *t* values, thus, indicating that academic tutoring and self-conceptual orientation did not have a statistically significant effect on the academic achievement of the participants in either the experimental or the control group. Therefore, it was not possible to generate hypotheses based upon the findings of this study.

Objective 3: To gain further knowledge about the self-concept of low-achieving students.

The *t* test analysis of the scores obtained on the pre- and post-tests of the Self-Concept and Motivation Inventory indicated that there was no significant difference in the self-concept of the participants in either group.

Objective 4: To measure the degree of change in the achievement of both groups of students after four months in the respective program components.

When a comparison was made between the pre- and post-test scores of both groups, the change that had occurred was a decrease in the mean scores and the standard deviations on the post-test.

Objective 5: To assess the effectiveness of each component of the Neighborhood House Tutorial Program.

A *t* test analysis was conducted on both sets of data which yielded t values that were not statistically significant. This indicates that neither component had a statistically significant effect on the achievement of the participants in the study over a four month period.

69. Wuycheck, Eileen Champ. *A Comparison Of Tutored Students With Nontutored Students In Reading Achievement*. University of Houston, 1971. 135p. Chairman: Stanley G. Sanders. 72-22,363.

The purpose of this study was to determine the relative effectiveness of tutoring on reading achievement of two groups of inner-city disadvantaged children—those third graders who were tutored and those fifth graders who did the tutoring.

This study required review of pertinent research and literature related to five different aspects of the problem. (1) There has been extensive interest in, and study of, the use of paraprofessionals and tutors. (2) There has been a recent thrust for improvement in the reading ability of disadvantaged learners. (3) There has been emerging an increased interest in learning theories as educators search for an answer to the problem of producing a literate population. (4) There has been an emphasis on a search for a way to meet the needs of disadvantaged learners to improve their achievement and self image. (5) There has been an indication of probable effectiveness in learning through the use of motivation and reinforcement provided in educational games.

Important facets of this research were planning, organizing, supervising, controlling, and collecting data. There were approximately a total population of 15,000 inner-city disadvantaged children in the summer school program. The tutorial program included one teacher in each school who supervised high school students and the tutoring teams of fifth and third graders. The high school coordinators made games to be used by the fifth grade tutors. One fifth grader tutored the same three third graders daily on a one-to-one basis. Third grade teachers conferred regularly with the supervising teacher about the reading games to be used in practicing skills for each student dependent upon his needs.

Twelve schools were randomly assigned to each of the two groups, the control and experimental. At the completion of summer school, three schools were randomly selected from each group. Thirty-six third graders and thirty-six fifth graders in each of the two groups were randomly selected to test the null-hypotheses. An analysis of variance for the hierarchial design was used to analyze the data. Description of the data included grade equivalents, standard deviations, and means.

The analysis of variance showed that tutoring was effective for the fifth grade tutors at a significant level of .01, and showed no significance for third grade tutees.

The means, raw scores, and standard deviations for the two groups in the third grade were similar. The F ratios obtained between schools, between treatments, and between schools within the treatment were not significant at the .05 level.

At the completion of the six weeks of tutoring experience, approximately two-thirds of the fifth graders in the experimental group were on or above grade level in vocabulary and comprehension, compared to only about one-third in the control group. The means were significantly different for the experimental and control groups between treatment conditions at the .01 level.

As a result of these findings, it was concluded that tutoring was effective in promoting reading achievement for tutors. The achievement of tutees was not significantly different from that of third graders who remained with regular teachers and in regular classes.

Attitudes of students involved in the tutoring program toward school and their relationships with school personnel were especially encouraging.

The results for the fifth graders indicated that similar practices should be implemented for the disadvantaged fifth graders in the inner-city during the regular school year. Further study is recommended for third graders in a search for an answer to the problem of improving their reading achievement.

70. Givens, Henry Jr. A Comparative Study Of Achievement and Attitudinal Characteristics Of Black and White Intermediate Pupils In Individualized, Multigrade and Self-Contained Instructional Programs. St. Louis University, 1972. 118p. 72-23,939.

The basic program investigated in this study was that of comparing the development of black and white intermediate level pupils who are provided an individualized instructional program with that of black and white intermediate level pupils who are provided a traditional self-contained classroom instructional program.

More specifically, the characteristics compared were: academic achievement, the rate of academic progress at various intelligence quotient levels, and the general attitude of both groups of pupils toward school.

One group of fifty black and white intermediate level pupils was randomly selected and instructed in a form of individualized techniques while the other group of fifty black and white pupils was instructed in a form of traditional classroom techniques.

The population sample was somewhat limiting since it included pupils from two schools within one school district.

To test the null-hypotheses relating to achievement the Iowa Tests of Basic Skills were selected.

To test the null-hypotheses relating to intelligence quotients and type of instructional program administered, the Lorge-Thorndike Intelligence Tests were selected.

To test the null-hypotheses relating to pupil attitude toward school, the Instructional Objective Exchange (IOX) Scale was selected.

Analysis of variance of a 2 x 2 x 3 factorial experiment with a randomized group design was used to test the hypotheses related to pupil academic achievement.

Analysis of variance of a 2 x 4 factorial experiment with a randomized group design was employed to test the hypotheses related to pupils attitudes toward school.

The t-test analysis was used to test the interaction between groups.

Findings

The statistical analyses results showed no significant differences in the overall academic achievement between white and black pupils in either of the two instructional programs. However, there was a statistically significant difference between the two groups of white pupils in the subject of spelling at the .05 level of confidence in favor of the individualized group.

Statistical results showed that the type of instructional program had no statistically significant effect upon the performance of pupils at any level within the intelligence groups (high, average and low).

Statistical analyses results showed a statistically significant difference at the .01 level of confidence between the individualized and traditional instructional groups in their attitudes toward teachers, learning and general attitude toward school. No statistically significant differences was shown between the two instructional groups in their attitudes toward peers and the school climate and social structure.

Recommendations

(1) More emphasis needs to be placed on the types of experiences designed to foster positive attitudes among pupils toward school as evident in the individualized program.

(2) Similar research studies need to be conducted in similar schools within the school district.

(3) More consideration should be given to the use of individualized instructional materials with low achievers.

(4) More attention should be focused on the selection of textbooks and instructional materials in meeting the needs of the individual child.

(5) A similar research project should be conducted within a maximum of two-years to test the validity of the statistical data of the current study.

71. Hartwig, Keith Eugene. The Impact Of Programmed Tutoring On the Reading Achievement Of Lower Achieving Second Grade Children From Low-Income Areas. University of the Pacific, 1972. 135p. 72-25,741.

Problem. Substantial numbers of children do not learn to read sufficiently well to enjoy success in school. There is no published empirical evidence regarding the effectiveness of programed tutoring as a supplement to reading instruction at the second grade level.

Purpose. This investigation was conducted to assess the impact of programed tutoring on the reading achievement of second grade children. Both criterion referenced and normative referenced reading achievement were considered. In addition, the differential benefits of programed tutoring for children of different perceptual reasoning abilities were investigated. Relationships between programed tutoring and pupil attendance and between programed tutoring and pupil mobility were also investigated in this study.

Procedures. One hundred sixty-three lower achieving second grade children from six elementary schools serving low-income areas were randomly assigned to experimental and control groups on a school-by-school basis. Two experimental pupils were selected for each control pupil. The pupils in the experimental group received fifteen minutes of programed tutoring daily for seven months as a supplement to their regular classroom reading instruction. The tutoring was provided by trained, salaried para-professionals. The tutoring materials were designed to accompany the Harper & Row basal reading series used in the classroom reading program. Eligibility for the tutoring program was determined on the basis of scores below the school median on the Harper & Row Second Year Readiness Test Criterion referenced reading achievement was assessed by means of the Harper & Row reading achievement tests. The Cooperative Primary Reading Test was used as the measure of normative referenced reading achievement. Perceptual reasoning ability was determined with The Coloured Progressive Matrices Tests.

Findings. The tutored pupils scored significantly higher than the nontutored pupils on the criterion referenced reading achievement instruments in terms of raw scores. There was no significant difference in the raw scores of the tutored and nontutored pupils on the normative referenced reading achievement instrument. No significant differences were found in reading achievement among pupils of varying perceptual reasoning abilities. No relationships between the treatment and pupil attendance, and between the treatment and pupil mobility were established. There were apparent differences between pupils tutored in both the first and second grades and those tutored in the first grade only relative to reading achievement, attendance, and mobility. These differences favored the two year tutees, but were not tested formally due to the small size and unrepresentative nature of these groups of pupils.

Conclusions. The investigator concluded that programed tutoring did enhance the criterion referenced reading achievement of the experimental subjects, but the educational significance of the amount of improvement was questioned. The investigator concluded that perceptual reasoning ability was not a factor in reading achievement, and that pupil attendance and mobility were not related to the programed tutoring treatment. These conclusions were discussed, and possible explanations were offered.

Recommendations. The investigator recommended that the program be given a second trial with modifications suggested by the possible explanations of the limited success of the program. The major modifications dealt with the pupil-tutor relationship and closer coordination of the tutoring supplement and the classroom reading program.

72. Jung, Harold Robert. Relationships Of Pupil Perceptions Of an Individualized Learning Environment To Personal Characteristics and Achievement. The University of Wisconsin, 1972. 242p. Supervisor: Professor M. Vere DeVault. 73-9204.

Relationships between pupil perceptions of their learning environment, personal characteristics, and achievement were identified for second grade pupils in a lower socio-economic multi-racial area of Aurora, Illinois during the first year of the school's use of Project PLAN, an individualized competency-based computer-managed modular instructional program. The Primary Learning Environment Inventory (PLEI) was develeoped and used to measure pupil perceptions of class cohesiveness, adequacy of the facilities, interpersonal friction, satisfaction with the class, disorganization of the class, difficulty of class work, and competition among class members.

Correlations were determined among the PLEI scale scores; pupil personal characteristics (father's occupational level, whether the mother worked outside the home, number of siblings, amount of Spanish spoken at home, verbal IQ, nonverbal IQ, Children's Manifest Anxiety Scale (CMAS) score, the lie scale from the CMAS, and the pupil's reading program); and cumulative reading achievement scores, cumulative mathematics achievement scores, and number of Teacher-Learning Units (TLU's, modules of project PLAN) completed during the first three quarters of the school year. For each PLEI scale, separate regression analyses were performed for each sex to identify interrelationships between the PLEI scale score and the personological variables as predictors of the achievement measures.

There were no significant differences in distributions of PLEI scale scores between sexes, but there were significant differences among the three second grade classes in distributions for each PLEI scale except Difficulty.

Significant correlations at the .05 level were found between CMAS anxiety and PLEI scales for Cohesiveness (-.36), Friction (.32), Disorganization (.52), and Competition (.43), and between the CMAS lie scale and PLEI scales for Cohesiveness (.44), Facilities (.27), and Satisfaction (.36). The Facilities scale also correlated with the amount of Spanish spoken at home (.28), verbal IQ (-.34), and mathematics achievement (-.34). Satisfaction correlated with all of the other PLEI scales. Disorganization correlated with all except Difficulty. Friction correlated also with Cohesiveness and Competition.

Regression equations for boys showed significant interactions of anxiety with Cohesiveness and Satisfaction; verbal IQ with Cohesiveness, Facilities, Disorganization, and Difficulty; nonverbal IQ with Competition, and pupil's reading program with Satisfaction and Disorganization.

Regression equations for girls showed significant interactions of anxiety with Friction and Satisfaction; verbal IQ with

Cohesiveness, Facilities, Friction, Disorganization, Difficulty, and Competition; nonverbal IQ with Cohesiveness, Facilities, Friction, Satisfaction, and Competition; amount of Spanish spoken with Cohesiveness; number of siblings with Disorganization; whether the mother works with Satisfaction; and the pupil's reading program with Facilities and Disorganization.

There were quadratic and cubic relationships in many of the regression equations.

A theory of influence of social expectations on a pupil could be developed to explain results with Cohesiveness and Facilities. However, the hypotheses about the social expectations existing in this situation are only speculations, and the theory itself is unsubstantiated. Other unsubstantiated hypotheses which could explain results are: primary grade pupils escape from high interpersonal friction by concentration on academic work; dissatisfaction with the class keeps an anxious pupil's anxieties focused on his academic work rather than on distractions from school work; pupils can reach a level of satisfaction and low anxiety which results in non-motivational complacency, and that level is reached more easily by girls than by boys; difficulty motivates girls to doing more work, but in primary grades that increased work does not always result in greater achievement; pupils are more likely to use mathematics than reading as an arena for competition.

A proposed follow-up research program and a design for the implementation of one of the studies in that program were outlined.

73. McMonagle, Lily B. An Investigation Of Attitude Change In College Tutors Toward Black Children As A Function Of Required Tutoring. Temple University, 1972. 74p. 72-27,204.

Although education students have been required to tutor minority children as part of their educational program, little research has been directed toward ascertaining the psychological impact of the tutoring experience on the tutors. The limited research available on the cognitive impact of tutoring has shown achievement gains in low-achieving students recruited as tutors, but no change in academically competent tutors who volunteered their services. Although required tutoring has been reported, no data have been collected on the tutors. Therefore, the purpose of this study was to investigate attitude change in college tutors as a result of a required field experience.

The study of attitude change was drawn from the related literature on interpersonal relationships that are analogous to tutoring and from cognitive consistency theories of attitude change. Thus, it was hypothesized:

I There is attitude change in tutors toward black children as a function of tutoring.

II The degree of attitude change in tutors is greater for those who tutor for a longer period of time than for those who tutor for a shorter period of time.

III The degree of attitude change in tutors is greater for those who tutor under a one-to-one tutoring condition than for those who tutor under a one-to-group condition.

IV There is a positive relationship between attitudes toward black children and perceived success in tutoring.

A semantic differential (SD), based on Osgood's technique was designed by the author to assess attitudes in tutors toward black children. Scores on the SD provided an index of attitudes. The scores on the concept Black Children were analyzed for the evaluative (E), potency (P), and activity (A) factors represented in the SD.

The subjects of the study were Caucasian upperclassmen enrolled in teacher education programs who did not have a previous tutoring experience. Two separate samples were used for the study. Sample I was used to test the first hypothesis and Sample II to test the other hypotheses. In Sample I (N=50), an experimental group of education students who tutored for one semester was compared to a control group who did not have a tutoring experience. The results of the analyses using covariance to test the first hypothesis, showed no significant differences between groups on any of the EPA factors of the SD.

Sample II (N=67) was used to test the second and third hypotheses with subjects randomly assigned to four tutoring conditions. The experimental conditions were based on the total time interval for tutoring and the pupil - tutor ratio. Hypotheses II and III were tested together based on the effects of time and ratio. The results of the analyses of variance, used in testing these hypotheses, showed no significant differences between experimental conditions on posttest scores of the SD for the concept Black Children on any of the EPA factors. Thus, the hypotheses were not supported, i.e., there was no significant attitude change in tutors toward black children in any of the experimental conditions.

The fourth hypothesis was tested by comparing posttest scores on the concept Black Children with scores on the concept Myself As A Tutor. A Pearson product-moment correlation was computed for each of the EPA factors. There was a low, positive correlation be-between these two concepts which was significant for the evaluative factor, but not for the potency or activity factor.

Further research is recommended either to verify or reject the findings of the present study. Replications of the study can be broadened to include other variables in the psychological domain.

74. Morita, Haruko. The Effects Of Cross-Age Tutoring On the Reading Achievement and Behavior Of Selected Elementary Grade Children. University of Southern California, 1972. 225p. Chairman: Professor De Silva. 72-26,041.

Objectives. The objectives of this study were to find out: (1) if the tutoring of younger elementary pupils in the same school by older students would result in higher reading achievement on the Stanford Reading Test for both the tutors and tutees; (2) if there is improved behavior of the pupils as measured by the teacher on the Burks Behavior Rating Scale; and (3) if selected variables (sex, grade level, I.Q., reading ability) interacting with the tutoring process have a significant effect on behavior and reading achievement. Theoretical implications of any changes which occurred were examined.

Procedure. The experimental population was drawn from the Aragon Avenue Elementary School in the Los Angeles Unified School District. The pupils, basically Mexican-American and from the low social-economic class, ranged in ages from six years, seven months to twelve years, six months. Involved were thirteen classroom teachers, two reading specialists, one school counselor, and one elementary school principal.

The experiment was undertaken from September, 1969, to the middle of April, 1970.

Research Design. The study was a pretest, posttest type design with 184 pupils randomly assigned to the experimental group and 123 pupils randomly assigned to the control group. The t-test and chi-square test were the statistical techniques used to determine the presence of significant differences in reading achievement gain and behavioral gain on the rating scale. The Spearman's rank correlation ratio was used to relate reading and behavior changes. A significance level of .05 was advanced as necessary for rejection of the null hypotheses.

Findings. Both the tutees and tutors showed a significant gain in reading achievement when compared with their controls. Variables affecting the results for the tutees were sex and age, whereas ability and amount of retardation in reading were not significant. As for the tutors, none of the variables selected for testing resulted in a significant difference. However, the variables of grade level, sex, I.Q. and reading score before treatment when interacting with each other produced results that were different for tutors and tutees than when variables were tested separately.

The Burks Behavior Rating Scale analyses for the tutees showed a significant gain over their controls in contrast to the tutors who showed no significant difference. There was also a high correlation between improvement in reading and improvement in behavior for the tutees, but not for the tutors with decreasing correlation with increase in age.

Conclusions. Anticipated outcomes were generally realized. A composite picture of a tutee who profited most by being tutored was a second grade girl, with an I.Q. of 90 or above between the ages of six years, nine months and seven years, eleven months, who was no more than three months behind in reading. A composite picture of a tutor who benefited most was a sixth grade boy, between the ages of ten years, eight months and twelve years, six six months, who averaged twenty-six months' retardation on his own reading with an I.Q. of either above or below 90.

Recommendations. It is recommended that (1) further study be directed toward exploring the variables involved with their various combinations; (2) more research be done on the type of school organization and personnel needed to coordinate the tutoring program; (3) a study should be made of the language development of non-English speaking parents tutored by their elementary age children who have been taught tutoring procedures at school.

Other Curriculums

75. Winton, Jack Lee. Articulation Problems Between Elementary and Secondary Schools Affecting Indian and Non-Indian Students In Cherokee County, Oklahoma. (Pages 89-91 "Mooney Problem Check List," not microfilmed at request of author. Available for consultation at the University of Arkansas Library). University of Arkansas, 1969. 113p. Major Professor: Dr. R.K. Bent. 70-403.

The purpose of this investigation was to determine the articulation problems and the effects these problems have on Indian and non-Indian youth who transfer from rural elementary schools to non-rural secondary schools in two Cherokee County, Oklahoma school districts.

The research design employed in this study, a variation of the free-response technique, was a method of collecting student statements of articulation problems, analyzing the data obtained, and formulating the final results. The principal aim of the technique was to produce a list of problems found in a significant number of instances that seemed to reflect hindrances to a gradual transition from rural elementary schools to non-rural secondary schools in two Cherokee County, Oklahoma, school districts.

The data consisted of (1) articulation problems, (2) student grades, (3) school activities, (4) school attendance, and (5) student adjustment problems. Free-response questionnaire forms, designed to elicit student statements of articulation problems, were submitted to 121 rural elementary transfer students who reported 462 articulation problems.

Articulation problems were classified into 15 categories which represented major hindrances to a gradual transition from rural elementary schools to non-rural secondary schools for the subjects of this investigation.

Most important and least important events were collected by means of the free-response technique. Three categories for each event area were established.

The chi-square test was used to determine the existence of relationship between the articulation problems of Indian and non-Indian rural elementary transfer students. Twenty-one chi-square values were computed to test the hypothesis of independence.

The phi coefficient of correlation test was used to determine the existence of relationship between certain variables for Indian and non-Indian transfer students. Thirty phi coefficient or correlation values were computed to test the hypothesis of independence.

Analysis of the data obtained indicated:

(1) The transfer students encountered 462 articulation problems which were placed in 15 categories. The Indian and non-Indian transfer students reported similar types and numbers of articulation problems.

(2) The transfer students reported similar types and numbers of most important and least important events occurring in the two secondary schools.

(3) The relationships of articulation problems to the transfer students' participation in school activities, honors attained, number of failures, school attendance, and adjustment problems were analyzed. The results indicated no significant differences between Indian and non-Indian transfer students in the effects of articulation on the five variables.

Implications

(1) Indian and non-Indian transfer students attending two non-rural secondary schools in two Cherokee County, Oklahoma, school districts are more alike than different with regard to the number and type of articulation problems encountered in the secondary schools.

(2) The rural elementary schools and the two receiving non-rural secondary schools are not providing for a gradual transition between the two school levels for transfer students as recommended by "authorities" in the field of secondary education in the following: a. curriculum approaches, b. curriculum experiences, c. curriculum concepts and principles, d. organization of school day, e. student adjustment to teachers' personalities and expectations levels, f. student adjustment to a new school environment, g. student adjustment to a new peer group, h. curricular and extra curricular offerings, i. importance of student failures and school attendance, j. student adjustment to the secondary school social environment.

76. Cochran, John Henry Jr. Opinions Of Rural and Inner City Elementary Teachers About Economically Deprived Children and Appropriate Procedures For Curriculum Development. University of Georgia, 1972. 133p. Supervisor: Dr. Paul M. Halverson. 72-34,055.

The purpose of this study was twofold. The first was to determine certain opinions that rural and inner city elementary teachers had about economically deprived children. The second purpose was to determine what these teachers considered to be some of the appropriate procedures in curriculum development for these children. One instrument was developed with five categories of opinions regarding curriculum, and a modification of another instrument was made with six categories of opinions regarding economically deprived children.

The population consisted of 275 elementary teachers of economically deprived children in Georgia. There were 171 inner city teachers and 104 rural teachers who participated in the study. The instruments were distributed to approximately 351 teachers with 275 usable sets of instruments being returned, a 78 per cent return.

The data were analyzed by computing means and standard deviations. Data were reported in terms of inner city and rural teachers' responses.

Some of the opinions of teachers as revealed by an analysis of the data from the instrument Opinions About Economically Deprived Children, were: 1. Economically deprived persons would be successful if they only exerted themselves. 2. Economically deprived persons lack ambition to obtain an education. 3. Parents of economically deprived children want their children to earn a living as soon as possible. 4. Poor parents mistrust teachers and other school personnel. 5. In order for economically deprived children to be successful, they must accept middle-class values. 6. Teachers must insist that middle-class values are adopted by economically deprived children. 7. Economically deprived children have shorter attention spans than other children. 8. Textbooks are not necessary for economically deprived children. 9. Economically deprived children use their poverty background as an excuse to do slipshod work.

The results of the analysis of the data from the Opinionnaire on Curriculum Development revealed that inner city and rural teachers had similar opinions on curriculum development. However, rural teachers did not agree that individualized instruction could be provided in most schools. Inner city teachers were of the opinion that it could.

Teachers agreed that the curriculum should take into account all cultural values in a community, behavioral objectives should be used, individual differences should be provided for, excessive tension should be avoided, multi-ethnic texts help in accepting other people, and parents should be informed frequently of a child's progress. They disagreed with the ideas that student interests should be disregarded, objectives should be formulated only by professional educators, children should not be allowed to tell of their experiences, commercial television has no value in class, and traditional "report card" intervals were sufficient evaluation.

It was concluded taht the teachers' opinions about economically deprived children are basically the same in the inner city and rural schools. Likewise, teachers differ very little in their opinions about curriculum development, regardless of location and size of system.

77. McIntosh, Walter Cordell. Adjustment Of the Curriculum To the Needs Of Black Ghetto Students. Columbia University, 1972. 163p. Sponsor: Professor Gordon N. Mackenzie. 72-23,704.

The study's object was to compare both traditional and innovative practices in selected ghetto secondary schools with recent proposals for improvement of Black education.

A review of the literature revealed four major areas of concern: curriculum reform, learning styles, self-concept, and learning environment. An observation and interview guide was constructed on the basis of the following sub-areas: curricula, goals and supportive services under curricular reform, pupil-teacher relations and student participation under learning styles, Black oriented courses, motivation and options under self-concept, and facilities, group control and community involvement under learning environment. Primarily sought in the area of group control were instances of efforts to promote student involvement by means of electives, discussion, and flexible groupings.

The investigation was conducted at two public schools, Intermediate School 201, New York City, and Huntington High School, Newport News, Virginia, and three parallel institutions: Educage of White Plains, New York, a tax-supported special school dedicated to salvaging alienated students from Westchester County public schools; Harlem Prep, a foundation funded Harlem school offering a Black-oriented college preparatory program and the Urban Center of the State University of New York in Brooklyn.

It was found that the two public high schools offered standardized and prescriptive programs and placed little emphasis on adaptation to Black learning styles or promotion of a positive Black self-concept. Decentralization at I.S. 201 had not entirely allayed community concern over achievement levels, while Huntington, with its traditionally strong community ties, seemed to be meeting parents' and students' goals. The parallel institutions had developed student-oriented academic curricula, the Urban Center also offering its College Adaptor, G.E.D. and vocational programs. Intensive efforts to increase motivation by means of electives, unscheduled discussions of timely issues and tolerance of diverse learning styles were observed at both Harlem Prep and Educage. Urban Center students seemed highly motivated by the opportunity to choose among several options and complete a selected program within one year or less.

Each of the schools attempted to supply a sound traditional curriculum, but while the public schools set only general goals the students at the parallel institutions were provided well-defined objectives. It appeared that a teacher's willingness to adapt to Black learning styles greatly facilitated pupil-teacher cooperation and that student involvement was promoted by encouragement of creativity and spontaneous contributions. In the areas of self-concept it seemed that Black students were highly motivated by supportive teachers and by the availability of options. Observations of learning environment suggested that groupings by skill levels or to promote participation were effective in raising interest levels and channeling Black life styles, and that community pressures and involvement affected the public schools far more directly than they did the parallel institutions, the relative autonomy of which was presumably ascribable to the fact that enrollment was voluntary, goals clearly defined, and achievement levels therefore relatively satisfactory.

Major conclusions were that Black students are highly motivated by clear, practical objectives and the availability of opinions, that teachers allowed to adjust groupings and course content in accordance with students' needs and interests enjoy greater success in arousing motivation, and that Black students can learn when facilities are limited and community involvement negligible if the teacher is willing to adapt to their life style and share their practical goals.

It was recommended that ghetto secondary schools (1) provide clear, practical and consistently stressed goals, (2) focus on reforms that enhance motivation and self-concept, such as introcution of Black studies and informal and individualized teaching and counseling, and (3) offer instruction in test-taking procedures.

78. Rose, Guy Porter Jr. A Comparison Of the Effects Of Two Curriculum Designs On the Growth Of Mental Age and Self-Concept Of Culturally Disadvantaged Kindergarten Children. George Peabody College for Teachers, 1972. 92p. Major Professor: Dr. Jerold Bauch. 72-25,366.

It was the purpose of this study to compare the effectiveness of two curriculum designs on the growth of mental age and self-concept of culturally disadvantaged children.

Procedure

The population from which matched random sample treatment groups were drawn was the entire enrollment in both a Title I and Title III kindergarten program in a rural county in Tennessee. The Title III group served as the experimental group. The year's kindergarten program was structured around an instructional objective curriculum developed by the kindergarten staff with the writer acting as consultant. The Title I group served as the control group. The program for the control group was a traditional, unstructured program with no specific focus in terms of instructional objectives.

Form A and B of the Peabody Picture Vocabulary Test were used respectively as pre-test and post-test measures of mental age. An adaptation of the Draw-A-Person Test was used as pre-test and post-test measures of self-concept. Pre-test and post-test data were analyzed by means of a Lindquist Type III analysis of variance design. Results of the basic analysis required additional data treatment. A Two Factorial analysis of variance design and the multiple t-test statistic were utilized for that purpose.

Findings

Mental Age

Both the experimental group and the control group made gains significant at the 5 per cent level of probability between pre-testing and post-testing. At each treatment group level, the experimental group made greater mean gains than the control group. Mean gain differences significant at the 5 per cent level of probability were found in favor of the total experimental group and each experimental treatment group level when compared to the control group.

Self Concept

Both the experimental group and the control group made mean gains significant at the 5 per cent level of probability between pre-testing and post-testing. While the experimental group made greater mean gains than the control group, none of the mean differences between the groups were significant at the 5 per cent level of probability.

Conclusions

1. Culturally disadvantaged kindergarten children can gain significantly in growth of mental age and positive self-concept through participation in a compensatory education program.
2. A kindergarten program designed around specific instructional objectives produces a significantly greater amount of growth in mental age for culturally disadvantaged children than does a kindergarten program based on broad goals with no specific focus on instructional objectives.
3. For culturally disadvantaged kindergarten children, there is no significant difference in the effect on growth of positive self-concept between an instructional objective kindergarten curriculum and a standard unstructured kindergarten curriculum.
4. For culturally disadvantaged kindergarten children, there is a significant and direct relationship between level of intellectual performance as reflected by attained mental age and positive (mature) self-concept.

Recommendations

1. This study should be replicated using a much larger sample of the population and extending the research to follow the subjects throughout their elementary school experience to determine the long range effects of the treatments.
2. This study should be replicated adding teacher behavior as a controlled experimental variable.
3. Additional research needs to be done in an effort to refine the instruments now available for use in identifying and quantifying self-concept.

79. France, Arthur Lloyd. A Case Study: Basis For Development Of A Curriculum Based On Images Of Self and Environment. University of Massachusetts, 1973. 104p. Chairman: Dr. Raymond Wyman. 73-14,636.

This dissertation represents an attempt to provide the basis for development of a new and radical curriculum for urban black elementary students.

The necessity for a new curriculum is based on the premise that urban, black learners are failing in traditional classrooms because the methods, materials, and teachers are alien to them.

This work should lead to further experimentation that will answer questions that this study will raise--the main question being the desirability of print as a primary medium of instruction for urban, black learners.

The study is basically descriptive, but it is built on an experimental model. The hypothesis is that urban, black learners will find school more interesting and learn more of the traditional subject matter if they use a continously emerging curriculum based on images of themselves and their environment as recorded and played back on videotape.

Students were given portable one-half inch videotape equipment, were briefed on its operation and then allowed to use this equipment to record activities of their choice or the choice of their teacher. Curriculum was based upon playback of these videotapes. The process was documented on audiotape and still pictures as well as transcribed excerpts that appear in this work.

Only part of the hypothesis is proved by the study--that part related to the development of interest by the students. But the description and analysis of the procedure provide the basis for further testing and subsequent development of a curriculum.

Author Index

Anderson, Etta M. 65
Bauer, Carl A. 45
Blume, Paul R. 42
Brogdon, Gayle L. 62
Brown, Greeta E. K. 57
Bryson, James R. 23
Bunsen, Dale M. 38
Button, Christine B. 14
Cochran, John H. 76
Cole, Kenneth W. 46
Chatburn, Dean N. 13
Connolly, Michael N. 14
Davis, George A. 15
Despain, Charles W. 40
Dorsey, Albert H. H. 5
Ellson, Earle I. 24
Fairman, Billie J. 25
Fisher, David L. 16
Fortney, Nancy D. 6
France, Arthur L. 79
Giles, Raymond H. 17
Givens, Henry 70
Goldner, Lawrence R. 26
Haines, Gerald L. 2
Hammons, Donald W. 27
Hartwig, Keith E. 71
Hawxhurst, Donna M. 55
Heidsiek, Ralph G. 56
Hicks, Joyce P. 68
Humbert, Jack T. 41
Hunton, Stanley R. 47
Hurley, Robert B. 48
Isenberg, Robert L. 28
James, Jerusha A. C. 29
Judd, Barbara A. 7
Jung, Harold R. 72
Kent, George R. 18
Kiah, Donald A. 19
Kingsley, Leonard D. 49
Kuefler, Melvin M. 30
Kral, William K. 39
Lanclos, Teresa G. 66
Lovins, Richard 37
Marek, Rosanne J. 8
McCarty, Jacqueline Q. 60
McIntosh, Walter C. 77
McIntyre, Lonnie D. 50
McMonagle, Lily B. 73
Mills, James C. 58

Morita, Haruko	74
Nash, McKinley M.	51
Newstat, Steven	31
Nowell, Willis C.	32
Olsen, Clarence R.	67
Owens, Douglas T.	33
Parker, Daniel W.	9
Pecoraro, Joseph	3
Pittman, Anne M.	63
Polk, Travis R.	20
Ratcliffe, Robert H.	1
Roland, Nathan L.	61
Rose, Guy P.	78
Sandoval, Alberto	10
Scheri, John C.	52
Sembric, Loretta J.	53
Shill, James F.	43
Shumaker, James E.	34
Silbaugh, Charlotte V.	35
Sprague, Arthur W.	11
Tefft, Virginia J.	59
Troutman, Benjamin I.	12
Wardrop, Gwendolyn K.	21
Werthem, Judith B.	44
Williams, Willie L.	22
Wilkins, Lacy	54
Williams, Wilbert C.	64
Winton, Jack L.	75
Woods, Francis P.	36
Wuycheck, Eileen C.	69

Institution Index

Arizona State University 46, 55
Arkansas, University of 75
Boston University 3
Brigham Young University 28
California, University of at Los Angeles 56
Carnegie-Mellon University 7
Columbia University 77
Connecticut, University of 37, 65
George Peabody College for Teachers 54, 78
George Washington University 19, 35
Georgia, University of 12, 33, 64, 76
Houston, University of 6, 69
Idaho, University of 9
Illinois, University of, at Urbana-Champaign 51
Indiana University 50
Kansas, University of 58
Kent State University 8
Louisiana State College and Agricultural and Mechanical College 27, 36, 43
Massachusetts, University of 17, 22, 79
Maryland, University of 18
Michigan State University 14
Mississippi, University of 23
Michigan State University 31, 67
Nebraska, University of, Teachers College 38
New Mexico, University of 10, 41, 59
New York University 26, 48
North Texas State University 20, 25, 60, 62
Northwestern University 1
Ohio State University 11, 15, 68
Ohio University 53
Oklahoma State University 39, 42
Oregon, University of 30, 57
Pittsburgh, University of 34
Rutgers University 44
South Carolina, University of 61
Southern California, University of 2, 24, 45, 74
Southern Illinois University 47
St Louis University 70
Stanford University 63
Temple University 73
Tennessee, University of 32
Texas, University of, at Austin 4, 66
Toledo, University of 49
Utah State University 13
University of the Pacific 71
Virginia, University of 5, 52
Washington State University 40
Wayne State University 21, 29
Western Michigan University 16
Wisconsin, University of 72

Subject Index

Curriculum Practices 2, 3, 4, 6, 7, 8, 11, 12, 13, 15, 17, 18, 21, 22, 23, 26, 28, 30, 32 33, 35, 37, 38, 39, 41, 44, 45, 49, 52, 55, 56, 57, 59, 71, 73, 77, 78

Ethnic/Minority Groups

Appalachian 58
Black 15, 16, 25, 26, 37, 51, 65, 77
Eskimo 57
French 66
Indian American 3, 9, 11, 39, 40, 42, 56, 59, 60, 63
Mexican American 10, 74

Extra-School Environment 31, 48, 61, 72

Federal Programs

Bureau of Indian Affairs 9, 42
ESEA Title I 1, 28, 32

Grade Level

Kindergarten 25, 33, 66, 78
Primary 13, 57, 58, 59, 71, 72
Elementary 2, 3, 8, 9, 10, 17, 28, 29, 32, 37, 38, 39, 50, 53, 62, 67, 69, 74, 76
Junior High School 26, 31, 34, 35, 46, 55, 61, 70
Secondary 1, 2, 4, 5, 7, 11, 12, 14, 15, 16, 17, 18, 19, 20, 21, 23, 27, 30, 36, 41, 43, 45, 47, 48, 51, 52, 54, 63, 65, 77

Minority Group Comparison Studies

Black/White 5, 27, 32, 48, 50, 53, 61, 70
Black/White/Mexican American 4
Indian American/White 3, 75
Mexican American/White 62

Students: Characteristics and Abilities 5, 7, 8, 13, 14, 15, 16, 17, 19, 23, 24, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 37, 39, 40, 41, 43, 44, 45, 46, 47, 48, 50, 51, 52, 53, 54, 55, 58, 60, 61, 62, 63, 67, 68, 69, 70. 71, 72, 74, 75, 78

Teachers: Characteristics and Attitudes 14, 19, 20, 29, 36, 38, 76

Textbooks 1, 6, 10